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ORIGINAL ARTICLES.

AMERICAN INEBRIATE ASYLUMS.

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Institutional care and treatment of inebriates began first in this country, and up to this time has attained a degree of development and prominence greater than that of any other country of the world. There are in Great Britain over forty asylums where inebriates are received and treated; and at least ten or twelve more in Europe; three are in India, two in Australia and New Zealand, and two opium hospitals are in operation in China. With the asylums in this country, the number will reach to about one hundred and twenty in the world. It is difficult to ascertain the exact number for the reason that many of these asylums are irregular in their work, and are associated with reformatories, sanatariums and homes for mental diseases.

In Europe they are often sectarian church homes, and in this country many are private enterprises, dependent on the caprice of the managers and their successes. This is incident to every new work; and the formative stage, or the period of credulity that is always followed by the age of reason.

Asylum care of inebriates implies a recognition of disease and curability, which has been mentioned and urged for over two thousand years of the world's history. From the time of Hippocrates (and even before), down to the beginning of this century, the idea of drink madness and drink excesses being a disease, and curable by physical means, with restraint, has appeared in the science and literature of every age. Dr. Rush's writings in 1790 and 1809, seemed to have formulated the vague ideas along this line; although several European authorities carried the subject farther on they were practically unknown in this country; hence Dr. Rush may be said to have given the first inspiration and practical direction to the doctrine of the disease and its curability.

This idea was repeated in various ways, over and over again, until finally in 1846, Dr. J. E. Turner appeared as the first pioneer to build an asylum and demonstrate this fact.

Although the disease of inebriety had been recognized by a large number of eminent men in both this country and Europe, and asylums for their cure had been urged by the Connecticut State Medical Society of 1830, and the English Lunacy Commission of 1844, and others, the opposition of moralists and clerical reformers was so bitter and intense as to prevent any practical work. This has continued up to the present, only growing less and less.

In the year 1846, Dr. J. E. Turner of Bath, Maine, a practicing physician, became interested in the need of an asylum, from an ineffectual effort to save an early friend who was an inebriate.

He recognized the nature of the disease of inebriety and the need of hospital treatment and began an enthusiastic agitation of the subject.

He began by petitions and solicitations for money and influence to build an asylum, appealing to the New York State Legislature for years before a mere recognition was given. So intense was the opposition that clergymen denounced it from the pulpit, and many of the religious and secular papers condemned the theory of disease and idea of an asylum as insane and opposed by all common sense and judgment.

At this distance, this period of denial and persecution appears like a glimpse of the dark ages, and the medieval spirit that opposed every new truth of science.

Finally, after ten years of persistent effort, despite the most bitter opposition he succeeded in forming a company to build an inebriate hospital, with the late famous surgeon, Dr. Valentine Mott, as president.

In May 15, 1854, the first inebriate asylum in the world was chartered by the New York State Legislature. Laws were passed giving power to hold inmates and charter was granted. The city of Binghamton bought a farm of nearly 200 acres of land and gave it to this company. Donations of lumber, stone and all kinds of building material were made on solicitation. The corner stone was laid in 1858, of what was later a magnificent building, and at one time the finest type of castellated Gothic architecture in the world. Six years later a part of the building was completed and opened for patients.

The founder, Dr. Turner, was a man of indomitable perseverance and tireless energy, who worked on without aid from others, begging money and material and superintending the construction of all the details of the building. At length in 1864, this first asylum of the world was opened for the physical care and treatment of inebriates at Binghamton, N. Y. The principles of treatment on which it was established were simply remarkable in clear, defined, scientific conceptions of the nature and requirements of such cases. Absolute restraint and control was provided, and no one was received for less than one year. It asked no pledges or promises from the patient; it aimed to give each one positive protection and medical treatment. The patients were locked in at night and only allowed out for exercise under the strict care of attendants. Turkish baths were given twice a week; work rooms were provided for those of mechanical tastes. Amusements of base ball, billiards, bowling and carriage drives were urged each day. Each case was considered a suicidal case

of insanity, requiring long medical care and restraint. No question of honor, or appeals to the pride was considered, but in all, the use of exact means and measures were carried out with military exactness.

These methods of treatment were far in advance of that time, and even to-day are just beginning to be recognized as the latest teachings of science. The principles, plan of organization, and treatment, although endorsed and supported by its distinguished presidents, Drs. Valentine Mott and John W. Francis, of New York, and Chancellor Walworth of Saratoga, created much difference of opinion and opposition. The patients themselves,after the immediate recovery from the effects of spirits, protested against the confinement and doctrine of disease, and sought in every way through their friends to break up the methods of treatment. As many of them had been influential men, and had prominent friends, a storm of the most bitter opposition began against the founder. Two separate views or theories of treatment became the center of intense feeling. The asylum and management insisted that each case was more or less diseased and should be under absolute control and restraint for long enough time to effect a permanent cure. The patients and their friends insisted that while the case might be diseased, his recovery depended largely on his liberty and promise to get well. That restraint was an irritation and an injury, also that appeals to his honor and manhood were the real agents for final cure. The founder and his friends insisted on long, absolute restraint and military control of the case, with the application of means and measures above all caprice and emotional changes of the patient. The opposition urged that restraint should be only nominal at first, and length of treatment vary with the man and his disposition, to which should be added moral appeals and moral remedies.

After a long, bitter struggle, the board of management changed and adopted a practically free and easy plan of treatment and Dr. Turner and his friends were turned out. The central object was to make the asylum popular with the patient. This unfortunate controversy gave new impetus to the moralists, and those who doubted the disease theory, and they joined in a wild crusade to show the folly of such institutions. The bitter controversy which gathered about the management of this asylum attracted the politicians, and the noted William M. Tweed of New York City, and others became directors.

All this time the asylum was crowded with patients, and the income was diverted to secure personal ends. Finally in 1867 the board of management deeded the property to the State of New York for one dollar, without the advice or consent of any one. From that time a series of misfortunes followed, during which seven superintendents were in charge in eleven years. Then the State changed the asylum to an insane hospital, and a political governor, in justification of the act, called the inebriate asylum a failure. Notwithstanding the conflicts of public opinion, and the changing methods of treatment by inexperienced men in charge, large numbers of persons went away permanently cured, as was clearly shown by statistics gathered the last years of its existence as an inebriate asylum. The enthusiasm which had centered about this work at different times reacted, and the idea of failure and condemnation of asylum treatment for inebriates was spread far and near.

Had the physical treatment of the inebriate been a theory, this would have been its final death. But, like all other great enterprises of the world, the death of Binghamton Asylum marked the birth of a large number of similar asylums, some of which are doing grand work in the world. The great fact that inebriates were diseased, requiring positive hospital care, was demonstrated to the world by Binghamton Asylum beyond all question.

The advent of Binghamton Asylum was felt all over the world; even in far away Australia, an asylum was opened in 1859 that is still in existence. In Europe many small asylums began, although opposed as bitterly as in this country; yet they soon came under church control and gave great prominence to the moral and ethical side, and thus escaped the criticism others received. Long before Binghamton Asylum disappeared, a number of embryo institutions came into existence, many of which died from weakness and inability to bear the shock of opposition. Others struggled and are living to-day. One of these early asylums was the Washington Home of Boston, which began in 1857 as an inebriate lodging-house in the center of the city of Boston.

After years of opposition and serious trials it came under full medical management as a scientific hospital, and is now the oldest asylum in the world. Its late superintendent, Dr. Day, has had the largest experience in the management and cure of these cases of any person living. This hospital has had its wild storms of criticism and persecution incident to every new advance of science, but now receives about four hundred patients yearly. The second large asylum in the world that began in those early days and is doing good work, is Kings County Inebriate Home, of Brooklyn, N.Y., Dr. Blanchard, superintendent. This was opened in 1867, and, from small beginnings, has gone on to be a magnificent hospital crowded with patients. The disease of inebriety and the need of positive restraint and medical cure are the cardinal points of its management.

The Chicago Washingtonian Home was opened in 1867, and has been in successful operation up to the present.

The Franklin Home of Philadelphia, Pa., was opened in 1872, and is receiving a large number of cases every year.

The Walnut Lodge Hospital at Hartford, Conn., was opened in 1878 as a private corporate asylum, and has become prominent, although smaller than the rest.

These five are the largest hospitals in the world for the treatment of the inebriate. Over a thousand patients are received and treated yearly at these institutions.

The Washingtonian Home of Boston; the Kings County Asylum of Brooklyn, N. Y.; and Walnut Lodge at Hartford, Conn., regard the inebriate as diseased, and treat such cases on broad scientific principles.

The Chicago Home and the Philadelphia Home and some other asylums believe in the prayer pledge and moral influences as the most valuable of all means and remedies. Also that a short residence in the hospital is better than long treatment. Medicines are only used for temporary purposes.

These two classes of asylums represent the same old battle which greeted the first asylum at Binghamton, only less violent. The question of vice

and disease, as a compromise of half vice and half disease, is still the center of controversy. The first three asylums and a rapidly increasing number of small private homes and hospitals retain the principles and approximate to the plans of treatment laid down at Binghamton in 1864; while the others have no fixed scientific conceptions of the nature and needs of the inebriate or his malady.

Notwithstanding the misfortunes of the first hospital and its founder, a large number of similar places have been organized and managed with success.

As in all new enterprises, many of these hospitals must suffer from non-expert management and be organized on some theory of the nature and treatment of inebriety not founded on correct study and experience. After a time they are abandoned or changed to homes for nervous cases and insane. Over fifty different hospitals for inebriates have been established in America. More than thirty of this number are in successful operation; the others have changed into insane asylums, water cures, etc. Three large buildings or institutions are practically "faith cures," where all physical remedies and means are ignored. Several asylums are called homes for nervous people, to conceal the real cause, and thus protect the patients from the supposed stigma of inebriety. Others are literally lodging houses, where the inmates can remain a few days and recover from the effects of spirits. Several places make a specialty of opium cases; in some the treatment is empirical. In only a few of these hospitals is the disease of inebriety studied and treated on a scientific basis; the others are passing through the ordeal of "elimination and survival of the fittest" incident to every new advance of science. In many of the States large public hospitals are projected and awaiting pecuniary aid from the State or from other sources.

Of the forty asylums in operation in Great Britain to-day, only a very small number are conducted on scientific principles; the others are church homes and charitable retreats where temporary care is given for immediate necessities. A thorough scientific hospital has been doing grand work in Melbourne, Australia. Another has been organized in New Zealand under a competent board of medical men, and both of these hospitals are a credit to the skill and judgment of the managers. Two very well managed asylums are in operation in Germany and one in Switzerland. A number of similar hospitals have been projected in Norway, Sweden and France. In the latter country the inebriates are sent to insane asylums and placed in a ward by themselves. This has become an abuse which the superintendents of asylums have strongly denounced. The inebriate asylums of Europe are nearly all private institutions or under the control of churches and temperance societies. The Dalrymple Home, near London, is one of the largest and best equipped in Europe.

All these places, both at home and abroad, are yet in their infancy; not one of them are able to do the work that should be accomplished, because of the unjust criticism and obstacles which they have to overcome. The results of treatment in the few scientific hospitals for inebriates are most encouraging. The first statistical study was made at Binghamton Asylum in 1874. The object was to find out how many persons who had been under treatment continued temperate years after. Accordingly, 1,600 circular letters were addressed to friends of patients who had been under treatment five years before, asking the present condition of the patient. The answers indicated 62¼ per cent. as yet temperate and total abstainers. This result, after an interval of five years, was clear evidence that a large per cent. would, in all probability, remain cured during the remainder of life.

Dr. Day of Washingtonian Home, made a similar study of 3,000 cases who had been under treatment ten and more years before, and found over 32 per cent. yet sober and temperate.

Dr. Mason of Kings County Inebriate Home, examined 2,000 cases who had been away from the asylum for ten years, and found 34 per cent. of all cases yet cured. He expressed great surprise at this result, as most of the cases were considered incurable at the time of treatment. Other observers have made studies of a smaller number of cases with similar results.

The most careful authorities of this country and Europe agree in the statement that fully one-third of all cases who come under treatment for periods of three months or more are permanently restored. Other institutions where inebriety is treated as a vice, or by empirical methods, claim 80 and 90 per cent. of recoveries. It is needless to add that all such statements are not supported by published statistics. In view of the chronic character of these cases and the imperfect means of treatment, the results so far are encouraging, and indicate great possibilities in the future from a better knowledge and control of these cases.

Such is an outline view of the history and present condition of asylums in this country. The rampant empiricism which is so prominent to-day is indirectly rousing up a new interest in all asylums for inebriates. The increasing crowds of relapsed cases whose faith in the gold cure specifics has been misplaced, are rapidly filling up all asylums, and come in a measure prepared to accept physical treatment and to appreciate the need of means and remedies. There are ideals of the coming means and appliances essential for the successful treatment of inebriety towards which a few institutions are struggling. Each year's experience brings larger and clearer conceptions, and each institution is becoming more adapted for scientific work in this field.

An outline of the scientific treatment of inebriety in asylums in America will describe some part of the treatment common to each, but not yet attainable in its entirety, because of the numerous obstacles and want of support from public opinion and other conditions.

The situation of an asylum in the suburbs of a city or in the country near large centers, with ample grounds for retirement and quiet living, are essentials. A proper building, equipped with baths and all the appliances for comfort, with means of amusement, joined with ample legal power to hold the patient a year or more, are equally essential. They should be called hospitals, not only in full recognition of their physical disabilities, but as places where every condition of life can be regulated and every surrounding can be made to aid recovery and restrain. Literally a quarantine hospital, where isolation and removal of all the exciting causes, combined with appropriate treatment to build up and restore the deranged functional activities of the organism, can be obtained. The time of treatment should be from

six months to two years, and be governed by the condition of the patient and extend to a legal control on parole for a long time after leaving the asylum. In Connecticut the law gives control over all committed cases for three years, whether on parole or otherwise in the limits of the State.

The hospital should provide exact military restraint with duties and responsibilities, rewards and punishments suited to the condition and capacity of the case; also work, amusement and occupation, both mental and physical, as medicinal agents. Every condition of life should come under exact military control; baths, exercise, sleep, food and medicines all to be regulated and applied uniformly. Each one should be treated as suffering from profound disease of the brain and nervous system requiring long rest and building up. The general treatment should begin with an examination and inquiry of the facts concerning his past life and present condition. These examinations should be repeated every few weeks, because of the rapid changes and errors which are impossible to guard against in the first and later examinations. The use of spirits should generally be abandoned very early in the treatment, and the return of the drink paroxysm anticipated by the use of drugs, baths, exercise and special control.

Many of the paroxysmal drinkers are practically epileptics and require similar treatment. They are suffering from grave disturbances of the physical centers, and physical remedies are required in addition to other means. Other cases are delusional maniacs and paranoiacs out of harmony with every condition of natural, healthy living, and unable to correct and adjust themselves to such conditions. In others, nerve exhaustion is at the bottom of the drink impulse; inherited tendencies, reflex irritations, and many complex conditions which can only be discovered and treated in hospitals. When these are treated the causes are removed, and the alcoholic soil is exhausted and dies away.

States of poisoning from stupor to full delirium are made the subject of special treatment, according to the experience and theories of the physician. These acute symptoms followed by chronic conditions, require equally special remedies and means.

These are some of the general ideals in treatment to which every scientific asylum is moving. All asylums suffer for want of ample legal authority over their cases for sufficient time to secure permanent results. Public opinion regards asylums as of only temporary, and in most cases of doubtful value. The theories of their work are openly termed "fads," and supposed to be founded on some mercenary or selfish purpose. The pulpit, press and ultra reformers pass by on the other side, like the Levite. Public patronage is withheld, and most all asylums depend entirely on the income of patients for support. Hence they are more or less crippled in every way. Many asylums suffer from poor location, bad buildings and surroundings, inability to classify their inmates and apply special treatment to each one. In many places baths and systematic exercises can not be secured. The nutritive hygienic and physical treatment can not be carried out on the ideals of the managers; hence many asylums are using the means within their power in anticipation, and looking forward for larger and more perfect facilities.

The treatment of inebriety not only includes everything found valuable in hospitals for the insane, in reformaories of the most advanced type and in the modern sanitarian and homes for neurasthenics. The essentials for treatment in each of these classes are required for the inebriate. The asylum managed on the scientific plan of providing for the requirements of each case, must have the power of control, and special buildings the same as to the hospitals for the insane; the discipline and management of the modern reformatory and the appliances of the best sanitarians and private homes; then it can approximate to a measure of success in the treatment, that at present is only in outline. American asylums are leading the world in these directions of practical work, and while no one has combined only in the crudest way these appliances, many asylums are approaching it yearly. Asylums all over the world are at the beginning and infancy of their existence. A great deal of preparatory work must be done before they can reach the first stage of scientific work. The moral remedies by appeals to the will power and morals of the case must pass away. The delusions and palsy of the higher brain centers must be recognized, and dissolutions beginning in the ethical centers extending down to all the lower faculties must be studied. The great fog banks of metaphysical theories of free will, moral depravity, vice and wickedness, must disappear from all conceptions of inebriety, and its practical management in asylums. Asylums and managers who act on the theory that the inebriate is half wicked and half sick are crippled. Asylums and managers who attempt by drugs or moral appeals to restore and cure the victim are still far back in the stage of credulity. The specific vaunter, who professes to break up the symptom for drink as if it were the disease itself, is an empiric, either ignorant or by design. Asylums and managers who teach dogmatically the nature of inebriety and its only true remedies, are not very far along in their scientific work. Asylums who claim large percentages of cures from certain means and remedies are not worthy of confidence.

Inebriety is found, when carefully studied, to be the most complex neurosis of modern research, dependent on heredity and many physical causes, also physical condition and environment that are not clear to the most minute study. Asylums for treatment so far, by isolating the patient place him in the best condition for study of conditions and applying means for relief.

The more thorough this study, the wider the range of causes appear, together with the means and methods of relief. The most advanced asylum of to-day follows a general prospective plan of treatment, and has no specifics or no special theories that are not open to change and re-adjustment. Beside a few general facts, which stand out like mountain peaks in a new land, all the intervening space is unexplored. No one can speak dogmatically as to where inebriety begins and what the exact causes may be. No one can explain the varied phenomena of drink storms, of the action of spirits on the brain, of the power of heredity, of the brain condition which demands relief by the craving for neurotics, of the sudden cessation of this drink impulse under unusual circumstances, of its equally sudden outburst from causes unknown. Even in asylums the same uncertainty exists. Cases that

seem restored relapse, and others that are considered incurable become restored, showing that our present knowledge is very imperfect, and the known is comparatively nothing in contrast with the unknown.

Running through all this phenomena of inebriety is an outline of a uniform movement of cause and effect; of events following each other according to some law; good examples are the periodicities of the drink impulses, and the outbreak of such impulses from the presence of certain conditions that can be foreseen and studied. Patients under care in asylums present a remarkable uniformity of symptoms and progress that is often startling to the student. Not unfrequently such cases can be anticipated and the results of treatment known far in advance. The drink symptom is dependent on some conditions of brain degenerations and changes. It will suddenly die out and disappear under the most adverse conditions and surroundings. Examples are numerous of persons who become temperate, sign pledges, and stop all use of spirits under the most unfavorable circumstances. Every temperance and revival meeting furnishes illustrations of persons who are restored permanently, although the same means have been used many times before with no results.

Persons are known to stop drinking from the slightest supposed reasons, and in all these cases the last means used are credited with being the active causes. The true explanation in all these cases is that some change or evolution of brain function has occurred and the drink symptom has died out. It is not the last prayer pledge or solicitation of others, or the last drug or remedy of special means used that has caused this change. Other and more obscure causes are at work, and the time comes when their action is apparent in the cessation of the drink impulse. Physicians in charge of asylums recognize this fact, and realize that their best efforts are in building up the brain and nervous system, and placing the organism in the best possible condition for both organic and functional change. Remedies directed to the drink symptom are never curative; a dose of mercury acting on the liver is a rational method, more so than bromid to check the drink impulse.

Asylum study of these cases show that inebriety is often a symptom or phase of a neuroses which may break out and change to some other form. General paralysis, melancholy, and many forms of insanity, together with tuberculosis, and various neurotic affections follow frequently on the subsidence of the drink craze.

The statement that the gold cure specifics are followed by an increased number of insane among those who have used the treatment must be a literal fact. The proof of such a statement is found in the experience of every asylum, and the general principles of neurotic diseases. The number of such persons can not be easily determined, but the more powerful the narcotic used to stop the drink symptom, the more certain insanity and profound degenerations of the brain centers will follow.

All asylums for inebriates suffer from the large number of incurable inmates. Persons, who, after an uncertain course of treatment go away, relapse, and condemn the asylum for their failure. Much of the current opinions concerning asylums are formed by the irresponsible statements of incurables. Such persons seem to take pleasure in denouncing asylums in every place, and boasting of the intrigues of its inmates. On the other hand, persons who have received substantial benefit conceal all reference to their treatment and residence in an asylum. The result is that, all institutions are judged by the unthinking public from the statements of those who have failed to receive any benefit from its work. Unthinking physicians who suppose that the control of the drink craze is the central object of treatment often lend their influence to unfavorable criticism of asylum work. This, joined with bitter condemnations of moralists, complicate and increase the difficulties of every practical asylum, trying to understand scientifically this new field of medicine.

American asylums have many advantages over all foreign institutions, in freedom of caste and prestige; also in ability to follow independent lines of work and rise above the prejudices and opposition of those who dread change and advance. Some general conclusions may be stated, as follows:

1. The asylum care and treatment of inebriates began first in this century, and has grown and extended to all civilized nations of the world.

2. American asylums have developed the disease theory and the practical character of physical treatment in institutions, beyond that of any others in this field.

3. Asylums in this country represent nearly all stages of development and early growth, from infancy and childhood, with its feeble conceptions and infantile efforts, to the boastful assumption and over confidence of youth, on to the dawning truth of early manhood when reason and judgment begin to reign.

4. A few of these asylums discern some great outline truths which may be stated with confidence as ideals towards which there is a rapid movement.

5. Inebriate hospitals must take the place of jails and station houses.

Such places are dangerous in their mental and physical surroundings by intensifying the degeneration and removing the patient beyond hope of recovery. They are in many cases literal training stations for mustering armies of chronic maniacs that never desert or leave the ranks until crushed out forever.

6. Inebriate hospitals should receive the incurable inebriates and make them self-supporting, and build them up physically and mentally.

They would relieve the taxpayer and relieve society of untold burdens of sorrow and misery.

7. Inebriate hospitals should receive the recent cases and place them in the highest conditions of enforced health and vigor, and thus return a large number to health and sobriety again.

8. Inebriate hospitals can and should be self-supporting when once established. They should be managed on scientific business principles, like military training schools.

9. Inebriate hospitals should be built from money raised by taxes on the sale of spirits, on the principle that every business should be obliged to provide for accidents which grow out of it.

10. These are the realities which every inebriate hospital is approaching and which all experience points out as practical and literal in the near future.

11. The inebriate hospitals of to-day are only in the infancy of their work, contending with great opposition and prejudice, misunderstood, condemned, and working against innumerable obstacles.

12. Lastly, there is an intense personality in inebriate hospitals to each one of us.

They may bring salvation and restoration to some one near and dear.

They may be fountains of healing whose influence shall cross and influence our pathway in many ways.

13. Inebriate hospitals and their work are the great new lands wnich only a few settlers have reached. They are calling to us to come up and occupy, and thus help the race on in the great march from the lower to the higher.

DR. J. K. KING, Watkin's Glen—The essayist deserves great praise and credit for his long and patient work in this often unthankful line. The doctor stands eminent in this line of work. I have had opportunity to watch him very closely many years, and I consider him probably the best representative in this country on the view of inebriety being a disease. I do not know how many of us would go as far as he does in that line, but certainly he has done advanced work and has brought out that side. I have had a good deal of experience myself with these cases in various forms of treatment, and I seem to recognize in them two great elements: one is the element of disease which is a form of neurasthenia, and the other is the element of habit. I recognize habit as entering very largely into this thing, and there is no question but that habit after a time may become a disease. Now the methods of treatment lie in two lines: one is that of public inebriate asylums and the other of private institutions. The question is which is to take the advance. The public institutions are always subject to the danger that Buffalo and Binghamton have met; that is, getting under the influence of politics and following the unfortunate history of the asylum of which Dr. Dewey was the head. Private institutions lack one great quality of the public; that is, the ability to hold and retain the patient for a long time. The doctor has mentioned the length of time, and it seems to me from my experience that time is a great element in these cases. I have never found much difficulty in breaking up what you might call the disease. Turkish baths and other things, building up the system, etc., answer that purpose; but the difficulty is to retain them long enough, until the habit is broken off and until the moral character and the physical strength are established sufficiently for them to stand and let it alone. There lies the secret. When we can solve that question, we will have no difficulty in curing a great many; but the difficulty is to retain them long enough. Just as soon as a man who is accustomed to drinking gets fairly over it, his spirits rise at once and he thinks he is a free man and he is capable of going anywhere and having no trouble in the future, and he again rushes into temptation, and before he knows it is drinking. The fact is, the institutions do not retain the patients long enough to establish their physical and moral character. The doctor's idea of a State institution supported out of the funds that come from the sale of liquor is a very good one, but the question is, how long before it can be carried out? It reminds me of something that I saw when in Oklahoma last fall. In one of the principal streets in Oklahoma city there was a very large saloon where everybody seemed to go, and right overhead was a Keeley cure, so they went right together; they got finished up downstairs and went upstairs to recover. So I am afraid it will be in this question of establishing asylums out of the money that is received from the sale of liquor.

DR. J. G. KIERNAN—The history given by Dr. Crothers is exceedingly interesting, and he mentioned some matters which were noteworthy in regard to the New York experience. He did not, however, call attention to one of the most peculiar performances under Tweed and the régime, which was the attempt to reform an inebriate physician by placing him at the head of the inebriate asylum of Binghamton, the gentleman being imported for that purpose from Chicago I may say here that the Washingtonian Home in Chicago is a theme of ridicule. It is notoriously only a sobering up place, but so delightfully conducted that little arrangements of this kind crop up now and again; the inmates go off on a spree and their absence is first discovered in the police station. No attempt is made at treatment, except a certain amount of moral suasion and the medical agency of the miraculous pre-Raphaelistic chart which the head of the institution has hanging on the wall, and which he descants on to the admiration of the inebriates.

Dr. Crothers ignored one fact, i. e., that between 1864 and 1882 there existed what may be very well called the Philistine era of American psychiatry. That was the era when every bit of insanity was crammed into a very short Procrustean bed, and medical societies seemed the mouthpieces of mobs to enunciate certain lynch law doctrine with regard to the insane. It seems to me not a few of those blind sprees resemble in a great many of their characteristics the period of stupidity that occurs in many epileptics. The reference to certain cases healed by prayer, etc., brings into consideration another element the doctor did not take into account. Every one knows that under certain conditions, while the subject is not hypnotized, he is in a peculiar state of mind and peculiarly liable to suggestion. That suggestion, that conception, coming under those conditions, dominate the man when nothing else will. With regard to the legal status of the question, it is the same as with the criminal. The inebriate can not be properly taken care of any more than the habitual criminal, until he is regarded on the same level as the insane. Under our law in Illinois there is one very curious anomaly. The inebriate is not for custodial purposes an insane person, while civilly he is, because when a man becomes an habitual drunkard you have a guardian appointed just the same as over an insane person or minor. In other words, the disease theory, and it can be regarded as nothing else, is taken into account in what might be called the civil aspect of the subject, but in what might be called the criminal aspect it is totally ignored.

DR. CLARK GAPEN, Omaha, Neb.—I would like to say a word in regard to the suggestion of police control in these cases. I am fully and heartily in accord with the doctor that this subject should be regarded and treated as a neurosis. I think I can go as far as any one in the acceptance of that theory. In my mind it is simply a vaso-motor neurosis usually induced by long continued use of alcoholics, but sometimes the neurosis occurs without such influences, and seems simply to spring up; but I think that especially should there be a different control in cases of this kind from ordinary police cases. Washington is the only city in the country that has adopted that police control. The superintendent of police there takes this view of it, and has arranged and equipped his department with reference to the management of those cases outside of the police station. He does not take those cases to the police station unless it is absolutely necessary and the individual has no other place to control him temporarily. As to the view that Dr. Kiernan has just expressed, I think that is simply deficiency in the law; the law is simply behind science in that respect. Chronic inebriety, that is this special form of temporary insanity, should for all purposes of control be regarded entirely as other forms of insanity are.

DR. J. E. EMERSON—I have one criticism to make. It seems to me the doctor is in error in saying that there is such a disease as the drink disease. I think it would be much more correct, judging from my own observation, to say that the tendency to drink arises from a variety of morbid condi-

tions, of conditions of imperfect development, which manifest themselves in some form of tendency towards indulgence in narcotics, not necessarily a disease, but resulting from various conditions. I do not think we can yet say that there is a disease. One man has spasmodic paroxysms of drink, another man simply has a feeble will and falling in with boon companions, gets to drinking. I think they should be classed as an entirely different condition. Still I think we must all agree that there is a physical basis, either in imperfect development, or you may say in a condition of partial degeneration of the general nervous system, lowered tone, at least a physical basis.

As regards the possibility of restraint which has been spoken of, our laws in Michigan provide for it, but in a very peculiar way. They provide for the appointment of a guardian on the application of any near relative, any blood relative or husband or wife; this guardian under the order of the judge of the probate court may send such patients to any hospital, asylum or sanitarium for treatment, to be retained there at the option of the guardian, with the proviso that the guardian must make a report whenever called upon by the judge of probate who sends the case, or at stated intervals of six months. I have in very many instances endeavored to get friends to place their relatives under the provisions of this law, but have never yet succeeded, although I have recommended it in many instances. The judge of probate has been invoked and has simply said he could not carry out the provisions of the law. Why, I never could find out.

Dr. John G. Reed—I have been very greatly interested in Dr. Crothers' paper and almost as much so with the comments upon it. For some time I have been giving some extra attention to this department of neurology, and it is very singular how one changes his mind as he comes in contact with men. I, at first, under perhaps the influence of enthusiasm, supposed that I had established some principles that would be abiding, and when I came to test them by the opinions of others, I was disposed to change them a good deal. It reminds me a good deal of the saying that the friend of to-day is the enemy of to-morrow and the enemy of to-day is the friend of to-morrow. It brings up the idea that this department of neurology is in a formative stage and that we hardly have any well defined principles of general application except in theory and those not well tested by clinical data. The gentleman on my right, taking exception to saying that we have the drink habit disease, or that the drink habit should be called a disease, seems to me to be somewhat in error. I hardly know how you will avoid using the term in the investigation of so broad and deep a subject. It seems to me that the multiple conditions are those of constitutional or congenital deficiency, which finally blooms out in inebriety, and that this should as much be called a disease as those conditions which produce epilepsy and other classified neurotic conditions.

Dr. W. H. Wells, Marshfield, Wis.—The paper just read is very interesting and very important to us all, and there are two views that might be taken of the neurosis side of the question, as to whether the neurosis is primary in the majority of cases, or whether it is acquired. Now I think there are two classes that we have; one in which the neurosis is primary and a still larger class in which it is acquired from the constant habit of drinking. As one of the members, in advocating the neurosis and sanctioning that view said, in the majority of cases it is brought on by the habit of drinking. I think it is well established that this habit of drinking can be acquired, and the constant habit then does produce a neurosis. The habit of drinking we can acquire the same as we can acquire habits of eating. We can acquire a taste for articles of food that when we first begin to eat are very disgusting, and it seems to me that in the majority of cases the habit and the neurosis are acquired rather than that it is a primary neurosis. You take the child born of drunken parents and the disease may be direct, primary and hereditary, while another boy may start out being healthy in all respects and thrown in the company of drunkards and the habit gradually fixed upon him, although he begins in a perfectly normal way and having no desire for it; but the desire is acquired and finally produces a neurosis that perhaps would require constant treatment in order to cure.

Dr. William Thomas Bishop, Harrisburg, Pa.—I began to be a temperance reformer on the reform idea. After a while I came to the good, sound, sensible idea that drunkenness was a form of insanity as much as horse-stealing or any other similar disease, and I think the mistake that they make is simply trying to get away from the fact and trying to make a compromise. I think that there is where the whole foundation is and the nearer you get back to it as medical men and recognize it as a fair and square issue, that it is a disease and that it is a form of insanity, that the law which governs it is the same as any other phase of insanity and the restraint the same, the nearer you will come to accomplishing what you want. Another thing: drop this indiscriminate use of the words, asylum and hospital. I have a great deal of fault to find with our brother about that; he straddled from one side to the other; an asylum might be a place for those that are chronic. Our State of Pennsylvania is just building an institution for the chronic insane; that would be an asylum; but as long as there is any hope, as long as this disease can be treated with a likelihood of cure then the term should be hospital. I think the idea of having the hospitals or asylums supported from the revenue from intemperance is all nonsense. Make the State realize the responsibility they have for the protection of these people and the protection of society. There is no question but that some people are natural perverts just as much as they are natural horse thieves, while others acquire it One thing must be kept in mind; that is, the continued use of alcohol or any other stimulant will cause an absolute breaking down of the tissue just as much as the injury of a hand in coupling on the railroad or any other injury; it is a permanent thing and you can not get away from that. You can only restore them the part that is left; you can not re-create, and the quicker we realize that it is a form of insanity and needs the same restraint and needs the same obligation on the part of the State for the same support, the nearer we will be to accomplishing what we need. Take a man insane on any other subject and try to develop in him a certain degree of moral responsibility. I went not long ago to a church service in an insane hospital; there were several hundred there. An epileptic was seized with an attack and wanted to fight. and there was an old soldier next to him who had been in the English army who became very enthusiastic and did not want to see this friend of his abused. I said to him, You would not fight an old soldier, would you? and he quieted right down. That will work, but you must remember that it is a disease and that the other is only an incident.

Dr. T. D. Crothers—I am glad to note such a general interest in a topic practically unknown. You may theorize for a long time and not get at practical facts. However, I will say that disease seems to be the only word that will explain the phenomena which appear in all these cases, although it is to be deplored that we insensibly associate these vague terms, such as habit, vice and free-will in the most indefinite way with these cases. Mere error confessed adds intensely to the disorder. This is a new phase of neurasthenic disease that will have a very large future and we can only be investigators. We should not theorize and think by so doing we have accomplished the highest good in this field.

SARCOMA OF THE PIA AND BRAIN, SIMULATING BRAIN TUMOR; MONO-SPASM AND MONO-PARESIS; OPERATION; DEATH ON THE THIRD DAY.

Read by title before the Section of Neurology and Medical Jurisprudence at the Forty-fourth Annual Meeting of the American Medical Association.

BY J. T. ESKRIDGE, M. D.
DENVER, COLO.

E. T. P., male, aet. 50, Iowa merchant, was referred to me by Dr. W. J. Rothwell. His family history is excellent. His health during childhood was good, with the exception of headache, from which he suffered considerably during attendance at school. After he left school his headache ceased almost entirely. He denies more than occasional use of alcohol, or excess in venery. During his twenty-first year he contracted a hard chancre and a few months later he lost most of the hair on his head. There were no other secondaries. About seven years after the initial lesion of syphilis he married. His wife lived nineteen years, and during this time she had several miscarriages, none of the children reaching full fetal development. The wife died a few years ago with brain trouble (probably syphilitic). Mr. P. seemed to continue in firstrate health until the summer of 1889, when he began to suffer from uncomfortable feelings in the back of the head. These sensations at first did not amount to pain, but as time went on he had occasional attacks of headache. Two years after the first appearance of the head symptoms, or early in the morning of July 8, 1891, while he was feeling quite well, without any aura, he was seized with a general convulsion which lasted three or four hours. He remained in an unconscious condition four days. The attack was not immediately preceded or followed by headache. During the next two months he felt nervous, his face was flushed, and he became sleepless, languid and lost flesh. He did not suffer with a distinct head pain, but he experienced an apprehensive and confused feeling.

In September, 1891, he experienced a seizure, during which he did not entirely lose consciousness. The attack began by a sensation which he likens to the imaginary feelings caused by one inhaling some deadly poisonous gas with a vague, indescribable taste. There was no distinct odor or taste. Immediately following these sensations he felt a nauseated sensation at the stomach, and a peculiarly indescribable sick feeling in throat. There was an increased flow of saliva, slight drawing of the face to the left, and he seemed to himself dazed.

From October, 1891, till the time of his first visit to me (June 30, 1892), there has not been a day during which he has not experienced one or more of what he calls "nervous discharges." The attacks are said to be similar in character. They have all been attended by a profuse flow of saliva.

He has just had an attack in my office.

He shakes all over, as if suffering from a violent chill, turns pale and moans. There is slight twitching of the muscles of the left side of the face, increased flow of saliva on left side, the left thumb is drawn down into the palm of the hand, with slight flexor contraction of the fingers of the hand. There is no loss of consciousness. Immediately after the attack, which lasts only a minute or two, there is paresis of the left hand, wrist and face muscles, with slight ptosis and wrist drop. Left pupil widely dilated. He describes his sensations as oppressive breathing, a sick feeling in throat, with intense chilliness, a peculiar taste, which he describes as an "electric taste." On questioning him further to ascertain if the sick feeling is not experienced in stomach instead of throat, he affirms that the sick sensation is in throat and left side of face. He says at times he feels as if the entire left side of body were on fire.

Examination, July 1, 1892.—Gait is somewhat halting, the left leg being used more awkwardly than the right. On closing eyes and walking backwards and forwards the disparity between the legs is more marked. There are no distinct ataxic movements of legs, trunk or arm muscles. Right leg muscles are much stronger than the left. Dynamometer: R. 150; L. 142. Knee jerks: R. nearly normal; L. sluggish, but variable, and increased by reinforcing. Deep reflexes of arms, increased, and nearly equal in each arm. Plantar reflexes, absent on both sides, although stroking the plantar surfaces causes some contraction of the leg muscles. Cremaster reflexes, present and about equal. Lower abdominal and epigastric reflexes, absent. The abdomen is very large, and covered with a thick layer of adipose tissue. He has double inguinal hernia. All sensory phenomena normal on right side. On the left side all sensory phenomena blunted, but not abolished except in parts to be noted. In left leg temperature sense is most affected. Cool substances are readily recognized as such, but warm substances make no impression as such until they have been in contact with the limb a few seconds, and then the impression is much less distinct than that made by the same substances in contact with right leg. Touch, pressure, posture and localizing senses seem to be slightly lessened in right leg. Pain sense is normal, or nearly so. On the trunk, little or no difference is recognized in the sensory phenomena of the two sides. On the index of the little finger of left hand he is scarcely able to recognize two substances as such even when held three times the normal distance apart. In other portions of the left hand, in left arm and face, there is only slight blunting of the sensory phenomena, less than is found in the left leg. Smell, normal. Taste, nearly normal, except on the left side, just immediately after an attack, when it is temporarily, nearly lost. Hearing: R. 1-12; L. 1-12. Tuning fork is heard about equally distinct in each ear.

Eyes: R. v-20-40. All fields slightly narrowed. Pupil normal in size, and reacts to light and accommodation. Some whitish atrophy of optic nerve. Arteries nearly normal in size, veins full and slightly tortuous. L. v-20-200. Yesterday just after one of his attacks, the pupil was dilated to three times the size of the right, and it did not react to light or accommodation. To-day the pupil is normal in size, and reacts well to accommodation, but slowly to light. Fields all lessened; temporal absent. Nerve very white, and shows distinct atrophy. Some drooping of upper lid.

He is ordered ten grains of potassium iodid thrice daily, and the dose to be increased five grains each day.

July 3, the medicine has not been given regularly. On the night of the fourth, he has a convulsive seizure, beginning in the left side of the face and extending throughout entire left side of the body and limbs, and three attacks of like character on the night of the fifth. During these seizures he is unconscious. July 6, he is taking thirty grains of potassium iodid thrice daily, and one-sixteenth of a grain of the bichlorid of mercury is given with each dose of the potassium. At 6 P. M. I find his face of a purplish color, he is very weak, and left side of face paralyzed. Dyn.: R. 120; L. 37. Saliva is constantly flowing in great quantities. Speech is thick, but he has no aphasia. Memory very poor. During the day he has had several convulsive seizures limited to the left side of the face, but consciousness has not been lost. On the seventh and eighth he has had three or four convulsive seizures in left side of

face, but no disturbance of consciousness. Immediately after an attack speech is impossible, and the muscles of the entire left side of the face are paralyzed and remain so for some time after the muscular twitching ceases. The auræ preceding the attacks are electric, shock-like sensation in left side of face, with a flat or stale sense of taste, and great burning in left side of face. On the ninth he has several somewhat similar attacks, one of which I witness, and it may thus be described: he shakes himself as if feeling chilly, complains of an intense and disagreeable cold sensation running up the upper portion of spine, and almost immediately the muscles of left side of face began to twitch. The left masseter seems to be the first muscle affected, then the left eye becomes convulsively closed and opened, followed by tonic closure of the eye; left side of forehead is next corrugated and drawn to left; mouth is now drawn well to left with clonic twitching of the muscles, and immediately following this, the left masseter and platysma myoides muscles begin a series of clonic convulsive movements which are kept up several minutes. Finally the left trapezius and left posterior neck muscles become tonically contracted and draw the head backward and to the left. The sterno-cleido mastoid muscle does not seem to be affected. The left masseter and platysma muscles keep up a clonic contraction several minutes after all the other muscles cease to be affected. Within a minute after the convulsive movements begin, the left hand drops, and the left wrist and hand muscles are completely paralyzed. I ask him to raise his right hand and arm. He does this without hesitation, but is unable to move the left hand. The paralysis of the wrist and hand passes off before the platysma and masseter muscles cease to twitch. During the attack there seems to be some spasmodic action of the muscles of the pharynx and larynx, most marked on left side, but affecting the muscles of the right side to some extent. At the height of the seizure the right masseter muscle occasionally twitches. The seizure lasts about ten minutes and during this time he is unable to open his mouth. After the attack the muscles of the left side of the face are completely paralyzed and flaccid, and remain so for several minutes. This side of the face is paretic between the seizures. He remains speechless for several minutes. When he is able to talk, he tells me that "at the commencement of the attack he experiences an electric shock, which seems to shoot through the entire left side, including arm, trunk and leg as well as the face."

July 10. He is now taking seventy grains of potassium iodid thrice daily, and has had three attacks similar to the one described, but he thinks they are less severe.

July 18. He is now taking 110 grains of potassium iodid thrice daily, and has experienced no convulsive movements for three or four days, although he still has chilly sensations in back of neck three or four times daily. Vision has greatly improved. Right eye, v-$\frac{1}{2}$, with nearly normal fields; L. v-$\frac{2}{7}$. All fields except temporal, which is lost nearly up to median line, nearly normal.

Aug. 1. No convulsive movements of any muscles since July 15, but he experiences what he calls "explosive cold spells" two or three times each day. The cold sensation, which he says is intense, begins in left cheek, and spreads over left side of face, down spine and over left side of body. There is constant tremor of the left depressor anguli oris. During last two days he has had headache for an hour each day.

Sept. 1. Only slight change in symptoms since last record. It has now been six weeks since he has had any convulsive movements. The tremor in the left depressor anguli oris still continues. About two or three times each day he has a "deathly" sick sensation arising from stomach, and almost instantly he experiences a cold or freezing feeling, which begins in left side of face and passes down left side of trunk. He is now taking 125 grains of potassium iodid and one-twelfth of a grain of corrosive sublimate thrice daily, and seems to have but little inconvenience from these agents. He has gained considerably in flesh.

The diagnosis is tumor in the lower Rolandic region, and an operation has been discussed, but owing to the probable syphilitic nature of the lesion it is discouraged in favor of continuing the antisyphilitic treatment. General sensibility, including tactile, temperature, pain, muscular, posture and localization senses, normal.

Early in September (1892), he becomes mentally greatly depressed; is apprehensive and says that he is losing his memory. There is no decided headache, but a dull, confused sensation in the head is constant. There are no convulsive seizures, but he still experiences the "cold sensations." He now becomes urgent for a surgical operation, and says that he would rather be dead than endure the mental suffering that he has to undergo. He fears, if something is not done to relieve him, that he will commit suicide. After explaining to him the unsatisfactory results following operations for the removal of syphilitic growths of the brain, owing to the tendency of the disease to involve adjacent portions of the brain and membranes, he decides to take the risk, saying if he could not get relief he is determined to die. The entire left side of face still remains paretic.

On Sept. 10, 1892, Dr. Parkhill, after employing thorough aseptic measures, makes a trephine opening in the skull one and a half inches in diameter, with the center of the trephine over the lower extremity of the fissure of Rolando. The bone is quite thick and very hard. On exposing the dura its external surface seems normal. There is undue tension of the membranes and no pulsation is discovered. On applying the poles of a faradic battery over the exposed membrane no contraction occurs in any muscle. The dura is opened and considerable watery fluid escapes. Feeble pulsation of the brain is now observed. The pia is opaque and greatly thickened, so that the convolutions of the brain can not be seen through it. Portions of the pia are from one-quarter to one-third of an inch in thickness. On applying the Keen double electrode, attached to a Flemming faradic battery, to the exposed brain substance, and using a current sufficiently strong to produce smart muscular contraction when applied to the hands, no muscular contraction takes place. The trephine opening is enlarged in all directions, and the same opaque and thickened condition of the pia is observed. A small incision is made into the brain substance, but nothing abnormal is found except brain substance is darker and firmer than normal.

With the thickened condition of the pia it is thought best not to explore the brain farther.

The patient stands the operation fairly well. The parts are dressed antiseptically and he is placed in bed, carefully surrounded by warm bottles.

Before the operation he made me promise that I would not let him suffer much pain after the operation, and that he should have sufficient morphin to make death painless should his case prove incurable. The operation was finished about 1 P. M. He sleeps until 5 P. M., when he awakes and complains of agonizing pain in the head. He is given one-quarter of a grain of morphin hypodermically. The same dose has to be repeated once or twice during the night, as he insists that his suffering is unbearable. The day after the operation his pulse, which had been about 100, increases to 120, his temperature arises to 101 degrees, and he is restless and complains a great deal of pain in the head. He refuses food, and it becomes necessary to force nourishment upon him. Two or three hypodermic injections of morphin, one-quarter of a grain each, are necessary to quiet him during day. On the morning of the second day after the operation he is evidently failing rapidly. During the night he has had several convulsions limited to the left side of the face, and one which involved the whole of the left side of body. As the forenoon wears on he sinks into a stupor, and by the afternoon he is profoundly comatose. He died quietly at 6 P. M., about fifty-three hours after the operation.

Sectio cadaveris, three hours after death. The brain only was examined. On removing the dressing the wound was found to be free from pus, and no evidence of inflammation was present. The dura was not abnormally adherent to the skull cap. The veins and sinuses of the dura were distended with fluid blood, but the external and internal surfaces of this membrane presented no macroscopic pathological changes. On removing the dura, the pia over the greater portion of the right frontal lobe, over the right Rolandic region and over the right temporo-sphenoidal lobe laterally, appeared opaque and thickened. The greatest thickening of the pia was over the lower Rolandic region, where it was at least one-quarter of an inch in thickness. The pia, over the entire surface where it was opaque and thickened, was abnormally adherent to the brain substance, and in some places, in endeavoring to detach the pia from the brain, portions of the cortex came off with the membrane. On carefully sectioning the brain no gross lesions were found, except in the lower Rolandic region, especially in the lower face center, where the cortical substance seemed abnormally dark. The incision into the brain substance, made during the operation, was found to be in the lower portion of the ascending frontal convolution, on a level with the lower end of the fissure of Rolando. Portions of the thickened pia and of the cortical substance of the brain, immediately beneath this membrane where pathological change seemed the greatest, were hardened in Müller's fluid for three months.

Microscopical Appearances.—"Pial membrane thickened, in places fully an eighth of an inch (one-fourth to one-third inch in fresh state).

"This thickening is due to small round cells in a delicate gliomatous tissue. Blood vessel walls thickened, intima thicker than normal. complete occlusion of some vessels. The tissue takes the stain very readily.

"*Diagnosis.*—Sarcoma (small round-celled). Glioma. Tumor mass in membrane.

"Sections show a delicate capsule of connective tissue, covered by endothelial cells. From the capsule delicate bands of connective tissue run into the mass, forming lobules which are, in some parts quite large. In other parts of the tumor no lobular arrangement is found, but the tiny threads of connective tissue run in and about the cells.

"The cells are small, round and nucleated.

"In a few places near the center of the growth the connective tissue is somewhat condensed, forming rings. In these rings of connective tissue are found large, round, yellowish masses, typical of psammoma. Under a high power (×450) no cellular arrangement can be made out, but a center with fibrillated rings about it can be seen. Many of the spaces in the center of the tumor contain nothing, but obviously they contained before section more of this psammomatous material.

"In and around the mass of small round cells are large, round, well stained plates of material, the nature of which is doubtful. No cell structure can be made out. They may represent the first stage of the psammomatous change.

"*Diagnosis of tumor mass.*—Sarcoma of the small round cell variety, with gliomatous tissue and psammomatous change.

"*Brain.*—Every section shows round-celled infiltration, extending through the gray matter into the white. This infiltration is especially marked along the line of the blood vessels. The stroma of gliomatous tissue is well seen.

"*Diagnosis.*—Sarcoma (glioma).

"E. R. AXTELL,
May 10, 1893. "A. S. LOBINGIER."

A few points in connection with the clinical history of the case and the results of the autopsy and microscopical examination are worthy of comment.

If a person who is suffering from symptoms of tumor of the brain gives a history of syphilis, we feel justified in looking upon the growth as being of syphilitic origin; further, should a trial with anti-syphilitic agents result in great improvement, we feel almost certain that the tumor is syphilitic in nature. We have long since learned in the treatment of growths of the brain that if improvement does not follow the use of potassium iodid and mercury, it is no proof that the growth is not syphilitic. In the case under discussion there was a distinct history of syphilitic infection, and on placing the patient on large doses of potassium iodid in connection with mercury decided improvement followed, so that for several weeks prior to the operation no convulsive movements of the voluntary muscles occurred.

The auræ that preceded each attack were limited to the left side, and mostly to the parts on this side affected by the pial lesion on the opposite side of the brain. The aura connected with the sense of taste was one of the first manifested in the history of the case, and may be accounted for by the pial thickening extending over a portion of the right temporo-sphenoidal lobe.

Is it possible to determine in a case of tumor of the cortical substance of the brain whether the pia is extensively involved? When the pia is infiltrated with the growth one would expect to find severe and persistent headache, but in the case just reported headache was rarely present, and it was never severe. The most important diagnostic symptom, it seems to me, pointing to pial involvement is the presence of two or more auræ occurring with or without convulsive movements. Multiple auræ, occurring regularly and at about the same time, are suggestive of extensive cortical irritation, involving numerous brain centers; a condition that is probably rarely met with in tumors limited to the brain substance. It is not probable that tumors of the pia can be removed with safety to the patient, on account of the extensive infiltration of the membrane in such cases.

There are several other features recorded in connection with the case reported in this paper worthy

of discussion, but I will at present only refer to one. During the irritative stage of the growth before paresis became permanent, disturbances in sensory phenomena were well marked, most affecting heat, next tactile, and least of all, pain sense. The sensory impairment was always most distinct immediately after an attack. As infiltration of the cortical centers for the face and arm progressed, and paresis of the face became well marked, all sensory phenomena in these parts became normal, except for a variable period following an attack. One explanation of this condition might be found in attributing to the cortical substance an inhibitory influence over the "sensory centers," whose inhibition is lost when paresis or paralysis results from destruction of the cortex. Another interpretation of the phenomena may be found in supposing that other portions of the brain cortex may perform the functions of disabled areas.

CEREBELLUM CYST—ANTE-MORTEM DIAGNOSIS.

Read in the Section of Neurology and Medical Jurisprudence, at the Forty-fourth Annual Meeting of the American Medical Association.

BY WILLIAM C. KRAUSE, M.D.

BUFFALO, N. Y.

For the history of this case and the pleasure of having made the observation, I am indebted to my friend, Dr. Linus T. McAdam of Buffalo, N. Y.:

Name, Jacob M.; age, 36 years; height, five feet seven inches; weight, 170 pounds; complexion fair; constitution robust, well developed. Antecedents, nothing of particular note was elicited; family history good.

Early History.—The patient passed through infancy and adolescence, without any serious illness; never contracted syphilis or gonorrhea. Some years ago he suffered a slight attack of insolation from which, however, he seemed to have fully recovered.

Present History.—On October 23, 1892, the patient consulted Dr. McAdam for pain in back of the head, dizziness, nausea, peculiar revolving sensations in his head and on standing or while walking an inclination to be drawn backward. So strong were these last sensations that while the patient was in bed he would be compelled to turn on his right side, his head deep in the pillow, or while working in a stooped position he would suddenly fall backward, and on several occasions received quite severe knocks on his head. Along with these symptoms there coëxisted a sub-normal temperature, slow pulse, furred tongue, loss of appetite, sallow complexion, discoloration of the conjunctivæ and constipation. The patient was administered hepatic stimulants, but without obtaining any alleviation of the distressing symptoms. A few days after this first visit he again consulted Dr. McAdam and complained of great thirst and gave a history of polyuria. On examination the urine was found to contain sugar in abundance and on measuring the urine it was found that he passed sixty to seventy ounces daily. About this time (Nov. 7, 1892), he experienced considerable difficulty in walking and was obliged to discontinue all work and remain at home. With assistance he was still able to walk about the house but his gait was unsteady, staggering, with a marked tendency to fall backward and to the right.

With the exception of the glycosuria and polyuria which subsided under careful treatment, the remaining symptoms gradually became more and more severe and a consultation was held. The disease was diagnosed as of cranial origin but no definite diagnosis was reached. All methods of treatment proving unavailing and desirous of further counsel the writer was called to see the case on January 17, 1893, with the family physician, Dr. McAdam.

The patient was found lying upon a couch complaining of intense occipital pains radiating toward the vertex. On sitting up he felt dizzy, nauseated and as if his head were being pulled backward. On attempting to walk his gait was staggering, with a desire to fall to the right and backward.

Psyche.—His mind seemed to be clear and unaffected; sleep, fair.

Motility.—The strength of the muscles of the extremities was diminished but no more than the inactivity to which he was subjected would warrant.

Tendon Reflexes.—The patellar tendon reflexes were slightly exaggerated. Other superficial and deep reflexes were normal.

Sensation.—There existed no disturbances of the sensory nerves; trophic and vaso-motor disturbances were likewise wanting.

Special Senses.—Unfortunately the fundus of the eye was not examined, due perhaps to the fact that no ophthalmoscope was present. An ophthalmoscopic examination was, however, promised but failed eventually to materialize. No abnormalities whatever of the special senses were discernible.

To me it seemed clear that we had to deal with some cerebellar neoplasm, but what its nature or origin I could not say. The characteristic symptoms of cranial tumor, such as intense cranial pain, obstinate vomiting, vertigo, coupled with symptoms which we are wont to denominate cerebellar, as staggering ataxic gait, inclination to fall backward, occipital tenderness, etc., warranted the diagnosis arrived at.

Not receiving the desired promise of speedy and certain recovery, the patient sought other advice, and the history or the course of the disease was unfortunately interrupted. On the evening of March 15, Dr. McAdam was hastily called and arrived in time to see the fatal termination. Inquiry elicited the fact that for two or three weeks previous the patient developed a slight fever with occasional chills. No convulsions were noticed at any time.

An autopsy was made the following day by the writer, assisted by Dr. McAdam, with the following results: the calvarium was rather thick; dura somewhat adherent. The pia was clear, vessels not markedly injected, Pacchionian bodies small and sparse. The convexity of the brain appeared healthy, the convolutions were not flattened and the fissures were of usual depth. The cerebrum was removed; beginning cephalad, the basilar structures carefully severed, and on cutting through the right side of the tentorium cerebelli, a clear amber-colored fluid flowed into the cerebral cavity. The cerebellum was carefully removed, and in the inferior occipital fossæ was found about one to one and one-half ounces of amber-colored fluid. On closer examination, the right lobe of the cerebellum was found to be flattened, boggy and considerably smaller than the left lobe. This condition was quickly explained by the presence of a large cavity in the right lobe, the walls of which had collapsed and the fluid had escaped during removal of the cerebellum. The entire right lobe appeared to have been undermined, and virtually was nothing more than the walls of the cyst. During the dissection and examination of the cerebellum the undertaker thoughtfully and thoughtlessly sponged the cranial cavity, thus depriving us of any of the cystic fluid for a more careful microscopic examination. It is therefore impossible to say just what the character of the cyst was; whether it was the result of hydatid disease, or of inflammatory or hemorrhagic origin.

My object in publishing the details of this case is not because it is an extraordinary one, or because the diagnosis was verified by the autopsy, but rather to prove that the symptom-complex of cerebellar disease is distinct enough to permit of more radical surgical procedure. The writer is not aware that much has been done in this direction; and certainly in this case much might have been gained through surgical interference.

The tendency of the patient to fall to the right and backward, and the discovery of the cyst in the right cerebellar lobe, would impress one with the idea of connection between disease and symptoms, both pertaining to the same side. Whether this law holds true in every case, I do not pretend to say. Another interesting fact was the temporary glycosuria and polyuria, its sudden appearance and its more sudden demise. Whether this was the result of pressure, or whether it was merely accidental, must be left unanswered, although I believe the former to be the more plausible.

382 Virginia Street.

SPECIAL INFLUENCES OF ALCOHOL ON THE BODY.

Read in the Section of Neurology and Medical Jurisprudence, at the Forty-fourth Annual Meeting of the American Medical Association.

BY T. L. WRIGHT, M.D.

BELLEFONTAINE, O.

In discussing the nature of inebriety, and the magnitude of its influence on mankind, it will be necessary to observe the effects of alcohol upon the physical body, upon the mind and upon the moral attributes.

And first, let us consider some of the effects of alcohol upon the material organism.

The influences of alcohol upon the human body are of a nature so intricate, so distracting and often so apparently inconsistent with each other, that it is difficult to classify them in a clear and satisfactory manner.

These influences might be arranged into groups representing on the one hand, drunkenness, its relations and phenomena; and on the other representing physical degenerations, with their various connections and dependencies. Perhaps as comprehensive a division of the subject as any would be as follows:

1. The effects of alcohol upon the nerves;
2. Upon the blood; and
3. Upon the physical integrity of essential organs and tissues.

This classification will no doubt prove to be defective; and the several lines and boundaries of distinction between its component parts will be, in many places obscure, or possibly lost altogether.

1. In speaking of the effects of alcohol upon the nerves, it will be proper to advert to the impression of that agent upon the muscular sense. Alcohol is carried everywhere by the circulation, and in drunkenness the functions of the muscular system are hampered and deranged. This fact arises in a great measure from the peculiar property of alcohol, which imposes a degree of paralysis upon the nervous system, in all its several parts and qualities. There is loss of muscular power, and also disorder in the functions of muscular coördination. Movements are out of proper relationship with each other. Partial paralysis from causes other than alcoholic, present when of wide application, similar appearances and defects. Take a case of general paralysis of the insane—partial, however, in degree. "This disorder," says Dr. Tuke, "is marked by loss of coördinating power over the muscles, especially those of speech and locomotion. Precise coördination of movement, such as is necessary for writing, sewing, playing upon a musical instrument, and like acquired and automatic acts, is much impaired, or quite lost." This is in every particular an exact description of the muscular disabilities of a person who is drunk. The movements assumed in walking will betray the condition of a person, even when slightly intoxicated. The feet are not raised fairly and clear of the ground, and there is frequent scraping or slipping of the shoes upon the pavement.

It has been said that "the commencement of intoxication was flushing of the face, indicating that the cervical sympathetic was becoming paralyzed."[1] This is probably true in most instances. But especially in neurotic periodical drinkers, there is a remarkable deviation from this rule. When the dipsomaniac, after a season of rest begins to swallow large quantities of strong liquors, "the vaso-motor centers in the bulb and cord" do certainly show indications of the toxic action of alcohol. But they do not consist of flushing the face through paralysis. The exhibition is rather that of spasm and rigidity, not only of the muscular system at large, but of the capillary blood vessels also,—their caliber being apparently diminished.

The beginning of a season of drunkenness in the neurotic is commonly marked by paleness of the face. The features are sharp and contracted. The nose is pointed, cold and colorless. The eyes are *not* rolling and without expression, as in ordinary drunkenness. On the contrary they are steady, although quick in movement. They also are bright and penetrating. The speech is *not* inarticulate, stammering and disconnected; but words are clear cut, perhaps "clipt," and evidently of spasmodic utterance. The muscular movements although somewhat constrained are not staggering, incoördinate and uncontrollable. In fact, while large quantities of alcohol may have been consumed, the appearances of intoxication which are the outcome of paralysis, are not always speedily developed. The paralytic stage of drunkenness may not appear for many hours in the neurotic drinker; though of course that is not the rule. The primary effect of alcohol upon the neurotic inebriate may be that of shock. This alcoholic condition is not without its important bearings upon the question of inebriate responsibility; for as long as it continues there is danger of violent and unreasonable outbursts of rage and hate. The consequences may be tragical; for there is an unnatural exaltation, both in the power and disposition to wreak vengeance for fancied wrongs. Dipsomania has been described as an insane exhibition among a group of insane exhibitions—all symptoms of a central disease. "The opinion which would make of dipsomania a separate disease, can not stand against a complete study of the facts. It is a detached page in the history of the patient's disease which can not be understood if studied by itself."[2] Another authority says: "It seems to me more correct to regard dipsomania as a symptom belonging to a general disease."[3]

The action of alcohol upon certain peripheral nerves marks it as a poison. A long and persistent course of drinking is liable to produce neuritis in one or more localities in the organism. This may prove destructive to the integrity and life of the special nerves affected. Herein alcohol acts in a manner similar to other tissue poisons—similar for instance, to lead and arsenic. The plantar nerve, the poplit-

1 Buzzard. 2 Magnan. 3 M. Foville.

eal, the musculo-spiral, the tibialis anterius, are some among the nerves for which the alcoholic poison displays its peculiar affinity. When the drinker loudly complains of pains in his legs and feet, and talks of rheumatism and neuralgia, the probability is that he is suffering from alcoholic neuritis in his lower limbs.

Among the larger and more prominent nerves which may come under the toxic influence of alcohol, are the phrenic nerve and the pneumogastric.

To the evil influence of alcohol upon the vagus, is attributed serious irregularities in the heart's action. Chronic pulmonary catarrh also, with paralysis and stagnation in the smaller and more remote bronchial tubes, may be referred to a kindred origin. It is believed moreover, that the fatality of pneumonia so remarkable in the drunkard, is largely owing to the injury inflicted upon the eighth pair of nerves by the alcoholic poison.

The first indication of alcoholic neuritis is change of sensibility—there frequently being severe pain. But the morbid feelings may vary. It is possible that they may become sources of troublesome hallucinations and of true insanity.

The destructive effects of the alcoholic poison in neuritis may be seen in the condition of the nerve after the disease has run its course. One description declares: "The lesion of the nerves consisted of granular degeneration of the myelin, then partial removal of the products, causing varicosity of the nerve fiber, and lastly, complete disappearance of the degenerative debris, with collapse of the sheath."[4]

The alcohol of wine it is said, does not produce the nervous degenerations herein described. Since the discovery of distillation, and the enormous consumption of distilled spirits during the last two hundred years, wine has lost the position of respectability once accorded to it by many of the ancient writers. It is now looked upon with suspicion as a substance capable of leading the unwary into habits of vice and profligacy that were impossible before the discovery and use of the concentrated alcohols of modern days.

The disturbing influence of the paralysis of alcohol upon the normal display of the inhibitory nerve functions is generally recognized. Still, the facts and evidence on that subject are something obscure and incomplete; and they will not justify any labored effort towards detailed and specific description. The paralyzing (anæsthetic) influence of alcohol upon common sensation appears to have been known in the most remote periods of time. This is, in many circumstances exceedingly seductive; and yet, in its effects upon the mental and moral attributes it is often of very great injury.

2. In discussing the several divisions of our subject, a very brief synopsis of the more obvious *effects of alcohol upon the blood* is all that can now be offered in that connection.

A striking effect of alcohol upon the circulating fluid, is the production of changes in the appearance of its red corpuscles. They suffer shrinkage, and often a material change of form. Their color too, is affected, and they become darker under the alcoholic influence. When alcohol is mixed with blood, the red portion of the corpuscle may escape from that body altogether. The globules are deprived of their power to perform their functions completely and physiologically. They are incapable of absorbing and distributing the amount of oxygen necessary for the healthful supply of the bodily structure. In other words, "the blood globules when impregnated with the toxic spirit, have lost the property of transforming all their hemaglobin into oxy-hemaglobin."[5] Alcohol displays undoubted power over the white globules also; but the insignificance of its effects are not so readily demonstrable upon them as upon the red bodies.

One of the consequences of the toxic influence of alcohol upon the red corpuscles is the undue collection of carbonic acid within the organism. The retention of a portion of this acid is the subject of various hypotheses and explanations. It is said, for example, that a part of the oxygen inspired combines with free alcohol in the circulation, converting a portion of it into acetic acid.[6] This leaves an insufficiency of oxygen to properly change the character of the blood corpuscles from venous to arterial. The theory, however, does not account for the shrinkage, and other structural changes which occur in the red globules when brought strongly under the influence of alcohol. It is not therefore, simply a matter of defective balance, or of deficiency on one side or the other, but the influence of alcohol upon the red blood corpuscles appears to be really that of a *poison*.

The harmful retention of carbonic acid in the human body when it is under the alcoholic influence, depends upon more causes than one. The operations of alcohol are always complex. The elimination of carbonic acid by the lungs is impeded by overcrowding the capacity of those organs. The enforced exhalation of alcoholic vapor interferes with the normal ability of the lungs to expel the poisonous acid. The toxic qualities of the retained gas produce general uneasiness and also special distress. The headache which follows alcoholic intoxication is peculiarly violent; for the blood vessels of the brain are loaded with effete and noxious material. But a very serious complication that may arise from the influence of alcohol, consists of the accumulation of large quantities of fat in different parts of the organism. This may be owing to the fact that the constituent elements of alcohol, as well as of the waste and effete material in the blood, may undergo certain slight changes which result in the formation of fat. In the chronic inebriate, fatty degenerations of the liver, heart, and elsewhere, are liable to appear; and these in many ways provoke functional irregularities.

A deficiency of oxygen in the system may favor the establishment of the gouty or the rheumatic diathesis. "There is no possible chance of relief to those who are inclined to the lithic acid diathesis, if they arrest oxydation by the use of stimulants and narcotics. Arrest that oxydation by the use of alcohol, and you add to the amount of unhealthy waste which has to be removed. Lithic acid can only be removed by oxydation."[7]

Intimately associated with the deficiency of oxygen in the blood of the drunkard, is the low temperature of his body. While alcoholic paralysis exerts—no doubt by its inhibitory force—an influence in the reduction of animal temperature, the incapacity of the red globule to absorb oxygen and to eliminate carbonic acid, exercises an unquestionable tendency in the same direction. In profound drunkenness heat has been known to fall as much as 8° F.; and it has been shown that in some instances the normal tem-

[4] Hadden.

[5] Beaumetz. [6] Beaumetz. [7] Alfred Carpenter.

perature has not been restored for three days.[8] The complaints of the drunkard himself (upon emerging from his condition of anæsthesia) indicate very uncomfortable sensations of cold. When the inebriate begins to arouse from his torpor and stupidity, he is invariably chilly and shivering. He draws towards the fire, or hastens to protect himself with an abundance of bed clothing.

It appears to be a fact that alcohol may reduce temperature through the force of its paralyzing and anæsthetic properties. It is a question with some whether the reduction of temperature through the establishment of toxic and pathological states of the blood is not probably as injurious in one direction as it may be beneficial in another. In the high temperature and nervous irritation of typhoid fever, the effects of a topical application of alcohol (diluted) are sometimes of great value. The application should be quite extensive over the abdomen. The local anæsthesia will not only quiet superficial nervous excitement, but it apparently extends to the subjacent tissues. Under this treatment the morbid temperature will materially abate. Diluted alcohol may also be applied to the aching head and to the burning feet and hands. This procedure may accomplish valuable results without interfering with the normal functions of the blood globules. Should a degree of intoxication be induced, it may be remembered that abstractedly, intoxication may exist without a poisonous impression affecting the essential constituents of the blood; which fact in the reduction of morbid temperature is a point of no small importance.

In the hard drinker a portion of the alcohol finds its way into the blood and remains uncombined. It has a powerful affinity for water. It is speedily found in every part of the bodily structure. Of course much of it enters the system through the portal vein and the right side of the heart. But alcohol also seems to *diffuse* itself throughout the organism directly. It is in the breath immediately. Emesis shows that it remains in the stomach for a very brief season indeed; while giddiness, confusion of thought and movement—in short, *drunkenness* shows that alcohol mounts at once to the brain.

When there is a certain excess of alcohol in the system, the movements of elimination may proceed with a good deal of vigor. But when the excess is removed, there remains a portion apparently in a kind of static condition. At all events purgatives, diuretics, diaphoretics, the lungs themselves, appear to exercise a limited power only in its final disposition. It is not unlikely that certain structural degenerations may be connected with this state of facts; and especially fatty accumulations and other hyperplasias.

Delirium tremens is indicative of a brain saturated with alcohol. The natural wetness of the brain, containing as it does a very large proportion of water, probably invites the presence of alcohol more urgently than is the case with many other organs. However that may be, it is an opinion widely held that in delirium tremens there is a direct poisoning of the system at large, and especially of brain tissue, with alcohol pure and unchanged.

3. Alcohol has been called the "genius of degeneration." Some of the prominent changes in the structure of important organs, when the outcome of alcoholic impression, are indeed of great interest, and a brief notice of them will not be unprofitable. And first of the heart:

"The heart of the inebriate at first is made tense and full by alcohol, but is easily depressed. Under this depression, however, the circulation becomes of a character that has been termed *rotten*. The continued use of alcohol tends to permanent enlargement and dilatation of the heart, with stretching of the valves—especially the semilunars. There is also distension of the arterial system throughout, leading to loss of elasticity. There may be a feeble, large heart, dilated arteries, enlarged and bulging veins. The corporeal mechanism of the heart is, in fact, changed altogether. Such a condition of the circulation would necessarily occasion much uncertainty both of the mental and bodily functions."[9]

Again: In the fatty degenerations common in alcoholic inebriates, both in the light daily drinker and in the habitual drunkard, the heart is frequently implicated. The substance of the heart is permeated with fat globules, and its strength and endurance are impaired.

It is believed, moreover, that the structure of the heart may be seriously affected in consequence of alcoholic degeneration of the eighth pair of nerves.[10] The muscular tissue of the heart, it is supposed, may undergo shrinkage and atrophy from this cause, in a manner similar to the shrinkage of the leg from the toxic influence of alcohol upon the nerves there distributed.

The heart may also become exhausted through its too frequent and irritable pulsations in the daily drinker. The physiological rest between the heart beats is not permitted to take place. In this as well as in the several degenerations already named, there is incapacity of function, and heart prostration is, to some degree greater or less, always impending.

Degenerations due to alcohol very often affect the liver. They present a variety of aspects. Fatty degeneration is the one most commonly met with. The liver is enlarged in this affection, and it is loaded throughout its whole extent with fat.

Another prominent form of hepatic degeneration is cirrhosis, producing the so-called "gin liver." The gland presents a contracted and solidified appearance with a rough surface, from which it has been also designated the "hobnail liver," "nutmeg liver," etc.

The kidneys may likewise become the seats of fatty deposit, and they too are liable to undergo the characteristic changes in structure indicative of fibroid degeneration.

A remarkable property of alcohol is sometimes displayed in its influence upon the connective tissue of the organism. There may be hyperplasia and considerable enlargement of this substance. This is not simple hypertrophy, however. It is a consequence of the toxic impression of alcohol. The tissue implicated in this alcoholic hyperplasia is invested with properties quite different from the fibrous tissue in its physiological state. After a season of enlargement, it takes on a process of contraction. This movement is so marked that entire organs are misshapen, indurated and radically impaired in function. The fibers of the shrinking mass enclose the substance of the liver, or kidneys, or other organs in their embrace; and the outcome is the gin liver, the kidney with interstitial nephritis, and the like disasters elsewhere. These phenomena are the direct re-

[8] Dr. B. W. Richardson.

[9] B. W. Richardson. [10] Dr. Sharkey.

sults of the poisonous qualities of alcohol—there is nothing normal nor physiological about them.

The drunkard's brain has an abnormal amount of serum in it. This is owing, in part at least, to atrophy; and it "resembles in this particular the brain of the senile condition—of old age. The convolutions look small, the sulci deep, and in most cases the pia mater is easily removed."

The membranes of the inebriate brain, including the dura mater, are often thickened, and they may display other indications of organic disease. "The structural lesions of the brain show patches of sclerosis and other evidences of injury that are due to alcohol; and, in fact, these may resemble the changes that are found in the brains of paretics." It is true, however, that these degenerations are absent from a very large proportion of inebriate brains.

The relations of alcohol to paralytic dementia have been the subject of much controversy. There is one point, however, upon which all seem to agree in regard to that question, namely: Alcohol may become an exciting cause in the production of paralytic dementia in certain constitutions; as, for instance, when great mental labor has been forced upon a brain incapable of sustaining the strain necessary for its performance. The principle has been expressed thus (the alcoholic habit being present): "Enforced functional strain with incapacity to bear it, or disproportion between functional activity and power of resistance, may end in paralytic dementia." To this extent, at least, alcohol may be classed among the causes of paresis, and of the physical degenerations found in the brains of the paralytic insane.

Enough has now been said of the effects of alcohol upon the physical organism to indicate the nature and extent of their application. It is comparatively easy to investigate the bearings of the facts presented upon the mind and upon the moral constitution of the inebriate.

ON THE CARE OF EPILEPTICS.

Read before the Section of Neurology and Medical Jurisprudence, at the Forty-fourth Annual Meeting of the American Medical Association.

BY FREDERICK PETERSON, M.D.

NEW YORK CITY.

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The care of epileptics really includes their medical treatment as well as all other kinds of help extended to them. But medical care, such as it is, has been given to them for some thousands of years, and yet without adding much to the happiness of individuals under treatment, or accumulating much evidence of positive value concerning medication in epilepsy. Our results have been, indeed, almost valueless; for, with all our dosing with bromids, borax, belladonna and so on through the alphabetical index of the Pharmacopœia, it is extremely doubtful if in ordinary practice, 1 per cent. of the cases of idiopathic epilepsy are cured. Besides the practical incurability and hopelessness of the disease, its victims have suffered untold sorrows in the way of negligence and ill-treatment at the hands of the communities in which they live.

It is a peculiarity of this disease that the seizures may be momentary or may last for a few minutes only, recurring sometimes frequently, sometimes daily and sometimes months apart, thus robbing the sufferers of their consciousness and faculties for brief periods of time at long or short intervals. Between the attacks they may be as rational and as well qualified for all the vocations, duties and social privileges of life as any other human being.

These facts do not concern only a few members of the community. Epilepsy is a widespread disorder and it has been calculated that one person in five hundred is thus afflicted. Thus there would be in the neighborhood of one hundred and thirty thousand such unfortunates in the United States alone, and over twelve thousand in the State of New York. Even supposing this percentage to be exaggerated to a very great extent and that the actual ratio were one to one thousand, the number of epileptics would still be enormous and would constitute a large part of our defective classes.

Outside of the efforts, thus far comparatively futile, of physicians to alleviate their purely physical infirmities, and to reduce the number and severity of the attacks, nothing has been done until late years to provide for their mental development and to meet the peculiar conditions of life which they are called upon to endure. Thus, no general hospital will receive such cases for treatment, because of the incurable and unpleasant nature of their malady. While much of the time thoroughly capable of acquiring an education, they are debarred for obvious reasons from the schools; the churches are closed to them; very few care to employ epileptics in shops, stores or offices or are willing to teach them trades. Few epileptics are at liberty to enjoy the companionship of their fellows, who are rather inclined to shun their unfortunate brethren. Thus, every avenue for mental or moral development, for occupation, for association with the rest of mankind is closed to them. They are even burdensome to their families. It is little wonder, then, that many of them grow up dull and ignorant, intellectually feeble, morally depraved, irritable in temper with tendencies to retrogression and degeneration rather than to advance. A few of them become insane and are sent to insane asylums. Others are not insane, but, ill adapted for existence under such miserable conditions, drift to the only homes offered to them, the almshouses. The almshouse and the asylum are the only refuge when abandoned by their friends. In the State of New York, for instance, where there are twelve thousand epileptics, some four hundred or more are in insane asylums, and some six hundred in the county poorhouses. The rest of them are scattered throughout the State in their own families, among the rich and the poor, in ratio to the population and to the relative proportion of these classes. Many are so slightly affected that they are able in spite of their seizures to pursue some of the ordinary vocations of life. Thus, I know personally of a doctor, clergyman, several bookkeepers, a bank president, a stockbroker, several clerks, some dressmakers, shoemakers, masons and a telegraph operator, who are epileptics, and yet able to carry on useful pursuits, albeit under adverse conditions. To all of us are familiar certain well-known historical or literary characters in whom epilepsy failed to restrict the development of their genius, such as Cæsar, Napoleon, Moliere, Petrarch, Dostojewsky and others.

It would seem, therefore, from the above facts that, although there is such a thing as epileptic insanity, the proportion of insane epileptics to sane epileptics is very small, much less than 10 per cent., taken at the utmost, and that this ratio may be reduced by affording these unfortunates such opportunities for mental and moral development as are enjoyed by other and more happily situated citizens; and not only may the percentage be reduced, but the comfort and prosperity of all epileptics be increased by proper provision on the part of the State or through private channels such as institutions of a peculiar character adapted to their peculiar needs. A large public hospital is very far from meeting their requirements; for as has already been shown, medicinal treatment is uncertain and unpromising. Insane asylums should receive but very few, and almshouses none at all. What is demanded is an institution on the community or village plan, where medical treatment (such as it is) may be given to every member and where every sort of education, employment and social privilege commensurate with his needs and conditions may be extended to every beneficiary.

The colony system only can attain this object. A colony for epileptics is not an impracticable scheme proposed by visionaries. It is already an accomplished fact. The Bethel epileptic colony at Bielefeld in the province of West Thalia, near Hanover, Germany, was founded by Pastor von Bodelschwingh, over twenty-five years ago. He purchased a small farm with one house, and with four epileptics as a beginning established a charity which for nobility of conception and success in its results has nowhere an equal. It seemed to its beneficent founder, feasible to create a refuge where sufferers might be cured if curable, might have a home if recovery were impossible, might learn trades and the great majority become educated, useful and industrious citizens. From that small beginning there has been a gradual evolution of his idea, until now there are over one thousand epileptics, resident in some sixty or more houses, scattered irregularly but picturesquely over a large farm. Every one who visits this unique colony is deeply impressed with the happiness, contentment and prosperity everywhere apparent among the inhabitants of this little epileptic world. He sees that it is no longer an experiment and the previously unanswerable objections to such aggregations are by its success answered and silenced. At the time of my visit to Bielefeld, in 1886, there were but eight hundred and twenty-five epileptic patients. The employments were numerous and varied. A school provided instruction for some one hundred and fifty pupils of both sexes. All branches were taught. The dairy and the farm and garden occupied the attention of the greatest number of the patients, especially as a large trade in vegetable and flower seeds was carried on by the colony.

Among the shops for epileptic workmen were those for cabinetmakers, painters, varnishers, printers, bookbinders, blacksmiths and foundrymen, tailors and shoemakers; and among the stores, were a grocery, pharmacy, bookstore and a seedstore. The carpenters aided in the building and furnishing of new houses. Plans and drawings for new buildings were made in the architects room. Epileptics were employed in all the departments of industry relating to building. Books were printed and bound and sold here, especially works for moral and religious instruction. The illumination of mottoes for hospital wards and schoolrooms, and the coloring of picture cards were features of the work performed; washing, cooking, knitting, sewing and fancy work employed many. A bureau had been established for the collection and sale of museum objects, such as antiquities, articles of ethnographic and historic interest, autographs of distinguished people, coins, stamps, bronzes, gems, engravings, etc., and specimens from the animal, vegetable and mineral kingdoms. For men alone there were over thirty different callings.

The houses presented great diversity of architecture and position. They were well separated, generally enclosed in individual gardens, surrounded by fences, hedges and many trees, and altogether exhibited the homelikeness of a country village with little or nothing to suggest the restraints or discomforts of large institutions. There was one small cottage set aside for such cases as should be mildly insane, but bad cases of actual insanity were sent to insane asylums. Everything had been thought out carefully for the perfect evolution of this little social world; not only the multiplicity and details of occupations which would give each member of the community his choice of callings, but even the avocations, games, amusements and entertainments that might tend to divert his mind from the contemplation of his misfortune. And since my visit the colony has continued to expand, to develop new and valuable features and to confer its blessings upon large numbers of persons afflicted with this disease.

Taking Bielefeld as a model, nine other similar epileptic colonies have been established in Germany, one in Zurich, in Switzerland, and one in Holland. Most of these are not conducted by the State, but are under the jurisdiction of private or church charities. None of them are altogether self-supporting but some of them approach very near to it.

It should be stated that before the founding of the Bethel colony at Bielefeld, a somewhat similar institution, though on a much smaller scale, was begun in France in the village called La Force, near Lyons. Over forty years ago a noble clergyman named John Bost established this institution and it is in a flourishing state, doing a vast amount of good and redounding to the credit of its creative genius.

It has been found in all of these colonies that no harm is done by bringing epileptics into contact with each other. They feel on an equality with their fellows in such a place, losing that sense of isolation and singularity which they can not but observe in the ordinary world as separating them from the rest of mankind. They enjoy caring for each other and being kind and helpful to their fellow sufferers. It has been noted, too, that the number of seizures almost always diminishes upon entering the new and hopeful and encouraging life begotten by the busy community.

Within two or three years, interest has been awakened in other countries in the matter of provision for epileptics, notably so in America and England, where their peculiarly sad condition had neither been noted nor considered. In 1890 Ohio took steps toward the establishment of an institution for epileptics, a commission, consisting of Messrs. J. L. Vance, C. C. Waite and one other having been appointed by Governor Campbell, pursuant to an act of the

Legislature to select a site and prepare plans for the purpose. Of various sites examined, one at Galliopolis seemed best adapted for the project and here a tract of one hundred acres was presented to the State by the citizens for the institution. To the writer, who was consulted upon the subject of site and plans, this seemed to be the best location offered; for, although an insufficient space for a large institution, there was plenty of land adjacent which could be subsequently added to the original tract. Contrary to the advice of the writer the architect felt obliged, probably owing to the demand of the community of Galliopolis for an institution of striking proportions, to group the buildings on a symmetrical plan, such as is frequently carried out in the public establishments for the insane. The Ohio epileptic hospital is built on the pavilion or cottage plan, a large number of these being grouped about the center or administration building. It will, therefore, not meet in this important particular the requirements of a colony for epileptics, although in respect to provisions for school buildings, shops and the like, an effort has been made to fit the institution for the particular kind of care needed by this class. The name of the institution for epileptics in Ohio is also unfortunately chosen, for it is called, "The Asylum for Epileptics and Epileptic Insane." The corner stone was laid with appropriate ceremonies November 12, 1891, an interesting address and historical review being given by General Roeliff Brinkerhoff, president of the Ohio State Board of Charities. Three of the buildings were completed and made ready for occupancy in 1892 and nine additional cottages are now in course of construction, the last Legislature having made a liberal grant for the purpose. In California, detached buildings are being erected upon the grounds of the California Home for Feeble Minded in Sonoma County, with the view of accommodating the epileptics dependent upon the State for pleasant quarters.

Active measures are being carried out also in Massachusetts, Pennsylvania, Wisconsin and Illinois for the purpose of securing State care and separate provision for the same class of unfortunates.

Next to Ohio, the State of New York has manifested the most interest in her epileptic dependants, and in the winter session of 1891-92 a law was passed by the Legislature making the State Board of Charities a Commission, to select a site and prepare plans for an institution for epileptics. The law was authoritative in requiring the tract of land secured for the purpose to be four hundred acres or more in extent, and the whole scheme of buildings to be arranged on the colony or village plan. A committee of the State Board of Charities, consisting of Messrs. Oscar Craig, William P. Letchworth, and Peter Walrath, has been busy all of the past summer and autumn (1892) in examining a large number of localities which they were invited to inspect by the officers of various counties. In their report made to their Legislature on Wednesday, January 11, 1893, the State Board of Charities unanimously recommended for the proposed colony a site in Livingston County, consisting of over eighteen hundred acres, the property of the Shakers, now known as the Sonyea Society of United Christian Believers. The Shakers have dwindled in numbers to such an extent that they decided to give up this colony and rejoin the mother colony near Watervliet, N. Y. The land is beautifully situated in the Genesee Valley, near the town of Mt. Morris and in one of the finest regions of the State. It is exactly fitted to meet the wants of a model colony for epileptics. It is traversed by two streams. One of these, the Cashauqua Creek, flows through the middle of the land in a deep gorge, with a fall of one hundred feet. This gorge and creek give immense advantage for the complete separation of the sexes in free colony life. The supply of water is abundant and the conditions for good sewerage perfect and adequate in every respect. The Western New York and Pennsylvania railroad runs through the land and two great trunk lines, the Erie railway and the Delaware and Lackawanna railroad are within a mile of the proposed colony. The soil is exceedingly fertile and well adapted for all manner of agriculture, horticulture, the production of berries and fruits for canning industries and the raising of garden produce and seeds of all kinds. It has some stone and brick-clay, which will prove useful in the development of certain forms of outdoor employments. It already contains scattered buildings for the accommodation of three hundred patients.

The law which was introduced at the last session of the New York Legislature embodied provisions for the purchase of this tract of land and also for the methods of management, government and admission of patients to the colony. As some of these may be useful to those interested in the establishment of similar institutions, a few of the chief points will be mentioned here:

The name of the institution is "The Sonyea Colony." Thus, any direct reference to its object is avoided in the title. The word "Sonyea," is an old Indian word, meaning sunshine, and is historical in that this point was once the site of an ancient Indian village of the same name. For the present all insane epileptics are to be excluded, but probably ultimately there will be some building for the insane, especially for such as become mentally deranged temporarily while residents of the colony, since their removal from the happy influences of the community system to an asylum for the insane would be very depressing and tend to retard rather than promote their recovery.

There will be nine managers appointed by the Governor, two of whom are to be women and two to be physicians. They are to represent the eight judicial districts of the State of New York, an additional member to represent the city of New York.

The colony is to have a medical superintendent, steward, matron and such teachers and other assistants as are necessary.

The main object of the colony is to provide for the indigent epileptics of the State, but private patients will also be admitted to an extent to be determined by the Board of Managers. Epileptics of all ages are to be received and cared for; minors are detained by authority delegated by the parents or guardians: adults are free to go or remain, as they choose, there being no deprivation of liberty of any kind by methods of legal commitment, such as are necessary in asylums for the insane. The charge for maintenance of indigent patients is to be borne by the State and a limit of $250 per annum per capita is established by the law. But it is expected that the colony will eventually become, to a very great extent self-supporting.

Patients that become insane are to be sent to asylums in the districts from which they come, in accordance with the lunacy statutes.

A special pathologist to reside in the community and devote his sole attention to the discovery of the causes and cure of epilepsy, is one of the features ultimately contemplated in connection with this great institution.

This bill was, unfortunately, vetoed by Gov. Flower for reasons best known to himself, and the humane measures for the relief of the thousand epileptics already upon public charge in New York State is therefore postponed for a year or two.

The care of the epileptic population is then summarized as follows:

All are to be treated in accordance with the usual regulations as to diet, hydrotherapy and medicinal agencies, with the hope that in this way between 1 and 6 per cent. of them may be cured and the disorder in a larger per cent. ameliorated.

Out-of-door employment in agriculture and kindred pursuits is to be provided in abundance. All manner of trades and occupations are to be carried on in an epileptic community, organized on the village plan. Facilities for education are to be afforded to almost every extent.

Amusement and entertainment and the enjoyment of social intercourse are to be privileges from which no epileptic will hereafter be debarred.

In this way the happiness of a large number of these miserable creatures will be materially increased, in spite of the distressing disease which they are called upon to suffer, usually for the whole of their lives; and though medical agents applied to their malady may prove inefficient, their fate can never be as wretched and hopeless as it has been throughout the world heretofore.

Although it is not given to every epileptic to describe his own sufferings as Dostojewsky does in his novel "The Idiot," or to delight the world with music as did the epileptic, Handel, or with comedy as did Moliere, or with poetry as did Petrarch, or with military exploits as did Cæsar and Napoleon, or with religion as did Mahomet and St. Paul, still it is a consolation to those afflicted with this malady to show that epilepsy and genius may coëxist, and that the possession of the disease does not necessarily lead to mental and moral degeneration. The patient may not reach the highest position among mankind, but under the new dispensation he will not be withheld from any attainment in education, nor prevented from exercising all of his capabilities for his own support and for his own welfare and happiness.

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ABSTRACT OF NOTES ON THE TREATMENT OF EXOPHTHALMIC GOITRE.

Read before the Section of Neurology and Medical Jurisprudence at the Forty-fourth Annual Meeting of the American Medical Association.

BY J. MADISON TAYLOR, M. D.

NEUROLOGIST TO THE HARVARD HOSPITAL; ASST. PHYSICIAN TO INFIRMARY FOR NERVOUS DISEASES; PROFESSOR OF DISEASES OF CHILDREN, PHILADELPHIA POLYCLINIC, ETC.

Dr. Taylor takes up the subject of exophthalmic goitre as understood at the present time; reviews its relationship to other vascular disturbances, associated with enlargement of the thyroid, as myoxœdema, cretinism and acromegalia. He does not see that at present the thyroid physiology warrants any large measure of hope that we shall treat this malady through thyroid juices, as in the case of the other disorders mentioned, and yet promises to explore this field later. He confines himself chiefly to the analysis of a number of cases long under his care, some of them for many years, and most of whom are well, summarizing the means through which these were improved. The treatment of maladies which demand but little constant supervision, and yet require prolonged watchfulness, is more or less difficult and unsatisfactory because such cases wander away; will not persist in treatment; and from their nature of unhopefulness have a tendency to fall into the hands of other medical men and have their treatment changed; also the exigencies of labor, fatigue, changed surroundings, etc., make it difficult to pursue any consistent plan, even with those inclined to be faithful. He takes the ground that this disorder is capable of much more hopeful treatment than is generally thought; that most cases are enormously improved, if rightly handled; that many get well.

The question of treatment is chiefly considered from the standpoint of his own experience. This consists in:

1. Regulated rest, with carefully graduated activities as time and circumstances warrant; systematic measures directed to the upbuilding of the general health; careful attention to nutrition, recognizing the trophic elements in the disorder.

2. Careful attention to vascular conditions, which are most noticeably at fault and which demand the most constant treatment. This consists of varying measures, regulating vaso-motor activities, as well as loss of nervous force through the easily disturbed nervous balance. This is done through attention to the skin from the surface by means of carefully regulated measures from without, and next the re-

view of certain remedies which seem to exert a control over the constant tendency to vaso-motor or neuroses, both superficial and deep.

3. To search out constitutional defects and remedy these; eliminate accidental poisons, either diathetic or temporary; eliminate toxines, as of internal sewage poisoning, which has a very direct bearing.

4. The regulation of the nervous or emotional balance by careful attention to the habits and environment of the individual, carefully regulating, so far as is possible, the habitual emotional strains and the possible ones, making much of moral teachings to those whose will power and mental equilibrium are gravely at fault constitutionally, and as inevitable entanglements due to months or years of suffering and susceptibilities.

5. A careful consideration of such measures as are regarded as specific, as electricity, of which much has been made by many writers, but whose value consists chiefly in the system and encouragement which is thereby exerted over the disordered emotional states.

Finally, a summary of the cases under observation when the original paper was written in 1888, the report of a number of others seen since then, and a careful review of the symptomatology and recent means of treatment.

A METHOD OF LOCALIZING POINTS IN THE HEMISPHERICAL GANGLIA.

Read in the Section of Neurology and Medical Jurisprudence, at the Forty-fourth Annual Meeting of the American Medical Association.

BY WILLIAM FULLER, M.D.
GRAND RAPIDS, MICH.

I will present to the Section the result of my work in the line of the subject given which I think is of value, since it enables one easily and expeditiously to locate any part of the surface or internal structure definitely, and with a precision that can be arrived at in no other way. I have hardened a brain with great care so as to maintain the natural shape as nearly as possible. The lateral halves were separated in the median line and each embedded in tallow, taking care to place each half in the same positions in the boxes surrounding them. Each half was carefully sliced by a gauge so that the slices were three-sixteenths of an inch thick and perpendicular to a line in the long axis of the brain, which was seven inches in length, making thus thirty-seven slices of each ganglion. The right ganglion was cut three thirty-seconds of an inch behind the left and photographs were taken of the divided surfaces of each slice. By this means I have obtained photographs of seventy-four vertical transverse cuts of the brain. The left side of the picture seen in the album is therefore three thirty-seconds of an inch behind the right, throughout the series which I now present for your inspection.

I have here a model which is roughly made to illustrate the principle of localization. We will suppose that the slices here represented are equal in thickness; the external markings are faithfully delineated and with photographs of the sections pasted upon the sections, the entire anatomy of any point beneath any portion of the skull can be taken in at a glance. To find as near as it is possible any point within the brain, it is only necessary to draw a line from the exterior angular process to the occiput, divide the line into an equal number of spaces with the model, and the slice of the same number on the model will disclose the anatomy of any point on the skull, or direct the position of any point required to be found as well as the relative positions of the internal structures. Prints of these photographs properly numbered would, in my opinion, be useful for the delineation of gross lesions of the brain for publication, which would be a means of familiarizing the profession with the anatomy of the brain, and would moreover assist each of us to understand the other. Suppose, for instance, that a lesion is delineated upon a certain section definitely localized by a model and extending through a certain number of sections, it appears to me that we could perhaps some time arrive at a just conception of the function of the various parts of the brain. There is little interest at present taken in the postmortem appearance of the brain, on account of general ignorance of its anatomy and from an unsatisfactory knowledge of its functions.

I have been interested heretofore chiefly in surgery; I have given some attention to the surgery of the brain, and I will take this occasion to rectify a mistake into which the profession has fallen. It is accredited to a French surgeon that he was the first to introduce surgery into the treatment of mental defects. The fact is, however, that in 1877 I made the first craniectomy for the relief of idiocy, which was published in the *Canada Medical and Surgical Journal*, of January, 1878. I not only operated upon two cases at that time, but also published a paper upon the causes of idiocy and other conditions of feeble mindedness. The publication of these cases was widespread, and the operation was ridiculed in both America and Europe in medical journals and by the press. If there is any credit in the way of priority in the procedure, it belongs to me, since it was I who was the object of the ridicule. I think, however, now as I did then, that the operation is of little benefit to the idiots or to the surgeons either, but that it is suggestive of a fact which may be of the greatest benefit to mankind, by giving material for reflection to the theologist and the educator, and for the instillation of charity into us all. When all men are practically convinced that mentality depends upon physical conditions for its manifestation, mental defects will be regarded as diseases of the body now are; proper remedies will be sought, pity will take the place of anger, science will furnish texts: the church with all other human things will perish, religion will reign in its stead, and a school system will be established upon reason; our children will then grow up into perfect adults instead of being precipitated into early graves and crowding asylums and prisons as at present. The peculiar symptoms manifested by disease and postmortem appearances are interesting material with which to educate astute physicians; but it is a sort of cannibalism after all that one should be sacrificed that another may be great. It is for us to initiate a revolution in mental sanitation, since those to whom this duty is intrusted are too bigoted to see when facts are plainly presented for their consideration.

THE CHAIRMAN—This is a matter of very great interest. I especially commend the practical suggestion about making brain examinations. The photographs will bear careful examination. The work shows a great deal of industry and skill on the part of Dr. Fuller.

DR. H. H. DONALDSON, Chicago University—It was last winter that I first had the opportunity of seeing Dr. Fuller's preparations, and I have not seen the one which is here upon the table before. Those which I have seen are exquisite casts of preparations from the dissected hemisphere, showing the course of the white fibers and a number of points than which I have never seen any better preparation. This is an idea which, I think, has been floating in the minds of a number of people for some time, but it has only been realized as regards the brain by Dr. Fuller, so far as I am aware. There is a French model which shows an enlargement of the medulla, which has been arranged in somewhat the same way, but the model has been magnified ten diameters and the magnification is in itself a disturbing factor; and there is no doubt that the student and others interested in the state of the central nervous system would be able to derive great advantage from the study of a model of this kind. I may add that in the Anthropological Building at the Exposition, Dr. Fuller has consented to exhibit a full series of his preparation.

THE CHAIRMAN—I would like to say that these sections have interested me very much, as I have occasion to do some postmortem work in this line from time to time, and it seems to me an admirable way of localizing, and it points out the way of describing the situation even of small lesions and of the beginning and ending of larger lesions; it would be well, I think, if Dr. Fuller would publish a careful statement with the accurate reference of certain of these sections to the position on the surface of the brain where they are met. Often it is important in describing a lesion of a ganglion and particularly in the interior of the brain to have not only the transverse positions, but also the exact position and extent of the lesions. This system should be carried out in three directions, at least, to be perfectly accurate and advantageous; that is, horizontal sections and sections longitudinally and transverse sections. These would answer for many purposes. Practically the number of sections is too great for book purposes or publication or to suggest as a method of record, and I should think in the sections which include only the ganglia and certain standard sections it would be important to indicate those more thoroughly and definitely. It is certainly a valuable method, and with additions, I believe, in the directions which I indicated of taking the sections in different directions and getting the appearances, it would be of great service.

DR. HUGHES—As far as my knowledge extends, I think that this is the nearest approach to a practical method of teaching students the regional anatomy of the brain extant. I never saw any sections or anything in Europe that approximated this in completeness. These sections and the models that the doctor makes, which are models of clearness and accuracy, I have found to be exceedingly valuable in the illustration of the anatomy of the brain in connection with my teaching in a large medical college. To those of you who have not seen the other models that the doctor makes—some of which were presented last year—I would say that these, in connection with those, enable one to make the essential regional anatomy of the brain so plain to the student that there is no excuse for his failing to have a fair working knowledge of what is necessary in the treatment of brain diseases. You will find that with the use of these models the relation of the external and internal capsule and the position of the ventricle, etc., become as familiar as a, b, c, and as plain as the regional anatomy of the liver and spleen.

THE CHAIRMAN—It seems to me that it would be well if the doctor would make the second part of his contribution as a separate note. It seems to me to be a note of priority as to the suggestion of the operation of trephining for idiocy, and the secretary will note it in this manner. Certainly he should have the credit for this, as it precedes the operations and suggestions of all other surgeons on this subject.

DR. FULLER—There is one thing I would like to say; when I started in on this anatomy, I started in to interest myself; but after I went to the American Medical Association last year, there was a gentleman wanted me to see if I could repeat the experiments. I went home, repeated them, and I thought I would like the benefit out of these things if I could financially, as it would cost me a great deal of trouble and expense, and I, of course, could not manufacture them myself; but tried to get somebody to do it for me. The first thing I was asked was if I could furnish protection. I could enlist capital if I could get protection. I got a lawyer to send down a couple of sets to Washington, but of course they could not see that it was a work of art and consequently, though I could take out a patent on each piece, which was so expensive a process that I could not stand it, I could otherwise obtain no protection. I consider this the same as a book or a work of art, but they could not see it in that light, consequently I have no protection on the preparations. I thought if these things could be included as works of art, if we could bring some influence upon them to look at them in that light, I could get these things out in such a manner that everybody could avail themselves of them; but as it is now I can not get any further. You will have to do something to help me out of this difficulty.

DR. HUGHES—What do they call it?

DR. FULLER—They could not call it anything. It was innominate. It will have to be specially mentioned and brought to their notice by some special request to influence their understanding; and I know I can take out a patent if I desire, but that would be a great deal of expense. I find that the intermediary wants about all there is in it; he wants me to work for nothing and himself to charge the profession a big price, so that I am afraid that I will have to get you to assist me in some way to have this so that we can copyright it; or else I will have to keep along in the old way and try to make a living at the practice of medicine. I think there is some money in this if it could be fixed in a way so that I could do something with it, and it will be of some benefit to the profession. If you could make some recommendation to assist me in getting those things copyrighted instead of patented, I would try to do all I could to present the profession with something so that they could teach students these things easily.

THE CHAIRMAN—I do not see how we could take any steps in this matter.

DR. FULLER—Books are copyrighted; I do not see why I could not copyright this.

THE CHAIRMAN—I do not see any reason why it should not be done, but I do not know whether that matter would be helped in any way by any special action of the Association. Perhaps it is better at any rate to refer the matter to a committee than to attempt to decide it here. Certainly the Association will gladly endorse the creditable character of the work by a resolution if necessary.

DR. FULLER—The only way to get at it is to influence the authorities at Washington to give a copyright, the same as they would on a book.

THE CHAIRMAN—I would suggest that this matter should come up under the head of business; then it could be referred to a committee if it is deemed wise on the part of the Association.

DR. H. H. DONALDSON—One point connected with the latter matter: In case Dr. Fuller sees his way clear to carry this matter any further, I think it would be extremely valuable if the two types of brain could be taken, giving model forms of each type; that would be only possible, of course, in case Dr. Fuller could realize his ideal in regard to the carrying on of his work.

SANITARY MOTES AND BEAMS.

Opening Address of the Section on Hygiene, Climatology and Demography, Pan-American Medical Congress, by the President.

ALBERT L. GIHON, A. M., M. D.
MEDICAL DIRECTOR U. S. NAVY.

"And why beholdest thou the mote that is in thy brother's eye, but considerest not the beam that is in thine own eye?"—(St. Luke, vi., 41-42.)

These words of the Teacher of humanity which "the Beloved Physician" of the first century has recorded, are an appropriate text for the opening address in the important Section with whose conduct I have been charged in this Congress.

Time was—and that no long time—when Hygeia, the neglected Cinderella of the medical family, slunk unnoticed among menials. Now that she graces the salon her proud sisters caress her and suitors court her favor. As an old admirer of this fair mistress whose colors I have worn through youth and manhood, I may be pardoned the personal exultation that I have lived to see her suzeraine.

The ascendency of hygiene has greatened and glorified medicine without dimming the luster of any other branch, but though her cult is established, her mission is not ended with the recognition of her supremacy and the faithful following of her own ilk. To-day she turns to the people and their rulers outside the medical fold and demands the place in their councils that is hers of right. A makeshift share in the administration of the sanitary interests of the country has been grudgingly allowed, but the inexorable demands of modern enlightenment can not be satisfied until the conservator of the public health shall sit a peer among the rulers. The minister of war may build mighty engines for destruction and defense and muster vast armies and navies, which disease can disperse with a weapon so tiny that the eye can not discern and no mere military expedient antagonize. The minister of finance may fill his treasure-houses with gold and silver by the ton, which can buy human souls—honor, virtue, independence—everything but the boon of health, God's free gift to man, through which alone he can be like His own glorious image. Commerce, agriculture, manufacture, fishery, mining and all the industrial occupations of the human race, which are now the objects of the intelligent supervision of cabinet ministers, who are grand-masters of political economy and social science, can not thrive without vigor of human blood and brains and brawn, which are the machinery of these occupations; yet until this decade it has not been thought that the intelligent supervision of a grand-master of the divine science of medicine was necessary to preserve this vigorous health of the community, without which even these other ministers can themselves only imperfectly perform their own offices of administration.

When I entered the service of the Government of the United States as an officer of the medical department of the navy, nearly forty years ago, with a minimum of experience and a maximum of enthusiasm and an exalted opinion of the dignity and responsibility of my charge, which a lifetime has only intensified, I was astounded at the total ignorance of sanitary provision then prevailing in the naval service. Medical officers were curtly reminded that their opinions and advice would be asked when desired; their protests at acts that filled the hospitals and mortuary lists were contemptuously unheeded; they were reproved for officiousness and punished as insubordinate; disabled sailors and marines were discharged and their places and those of the dead were filled without regret or remorse, but with the shameless boast that "if men die we can ship others;" like the Netherland commodore, some of whose crew had been killed by the careless firing of a shotted saluting gun, who accepted the apology for the accident with the nonchalant remark: "Dere are plenty more Dutchmens in Holland."

The battle-ships and cruisers of modern navies are not more unlike the brigs and sloops-of-war of forty years ago, than are the cleanly, well-fed, comfortably clad and cared for enlisted men, who go on shore daily, subscribe for newspapers and write letters; a different race from the begrimed and degraded "shellbacks," who were ordered to their work with curses and punished with brutality for offenses which neglect and ill-treatment had incited. The naval and military establishments have considered the beam in their own eyes, but civil authorities are still purblind to the necessity for organized intelligent sanitary supervision and direction, and grope for succor only under the flash-light of a pestilential visitation.

The following from a recent editorial in an influential journal is pertinent:

"Whether cholera has or has not made its appearance at Chester, which is practically one of the suburbs of Philadelphia, it is certain that the conditions reported to exist there are in the highest degree favorable for the introduction and spread of that disease. All accounts represent the neighborhood in which the alleged cases occurred as filthy beyond description and occupied by a class of persons who pay no attention whatever to the laws of health or personal cleanliness. Of course, the country now has the pleasant assurance that the place is to be thoroughly cleaned and effectively quarantined, but why were not the steps necessary for the protection of the public health taken before the resulting disease, whether cholera or not, had gained such a footing that already five persons had died from it? The time to lock the stable door is before the horses housed therein are stolen, and the way to treat contagious diseases is to prevent their appearance and not wait for them to gain a foothold and then try to stamp them out."

The Secretary-General has announced that the proceedings of this Section and its congener, the Section on Marine Hygiene and Quarantine, will constitute a special feature of this Congress. It is, therefore, incumbent upon us before adjourning to declare very positively the opinion of the members of this Section, experienced practical sanitarians from every country of the western hemisphere, that the interests of the public health must be intrusted to a department of the Government especially charged with their administration, with equal, independent, executive authority, as given to other National departments. Temporary legislation under the spur of emergencies does not befit this age. As the enlightened physician seeks to prevent his charges becoming ill, so should the guardian of the public health be able to forestall those emergencies, whose pecuniary cost in money expended and wasted, in trade paralyzed and diverted, in labor and its wages lost by the sick and terrified and dead, in a single epidemic, exceeds that of maintaining an efficient sanitary service for the whole country for a whole year.

The fault of the medical profession has always been its lack of bold assertion of its rights, but it can no longer hesitate to declare to trade and commerce and agriculture and manufacture that the

health and vigor which are essential to prosperity can not be secured by their own unskilled uninformed efforts. They must learn, as the military services have learned, that powerful armies and navies are the result of able and untrammeled medical departments. It is as unwise to confide the care of the National health to a financier, however astute, as to expect a postmaster-general to understandingly control a bureau of agriculture, a fishery commissioner to best administer the affairs of the public schools, and an attorney-general to direct the mining industries. The health of a nation is a National consideration, involving international coöperation. There should be no priority nor clash of sectional interests. State lines are not respected by epidemic intruders. No State barrier can be so defensive and impenetrable that the toxiferous germ can not pass through. The precise form of administration may be left to legislation, the indispensable requisites being that it shall be National, that it shall have parity of voice and influence in the National councils; that it shall have independent executive authority under the limitations common to other departments; and that it shall be intrusted to educated and experienced medical men, who alone are competent to assume its responsibilities.[1]

I have not wandered from my text in thus pleading for a National public health establishment. Spasmodic tentative provisions in emergencies are nothing but attempts to discover *motes* from abroad, when the *beams* at home should first receive consideration. To parallel further and in another sense, the scientific tendency of the day is literally towards *mote-hunting* through microscopes, instead of using our human eyes upon visible abominations. The sanitarian, official or amateur, needs but look about him to be appalled at the spectacle of indifference of rich and poor, high and low, to dangers far greater than any from cholera microbes, which confront them every hour, and it may be worth our while to indicate some of these beams in our own eyes, which we complacently refuse to see, while we magnify the motes on our horizon.

The preventable disease, which kills more of the human race than cholera and yellow fever together, and in its ordinary slow process of killing lessens the productive power of a community, directly by the enfeeblement of its victims and indirectly by its demands upon members of households and eleemosynary institutions for the care of these chronic invalids—*tuberculosis*—is tolerated with as little concern as the Mongolian exhibits for smallpox, or the Creole for yellow fever or malaria. The consumptive whose traits no professional acumen is required to recognize, frequents our crowded thoroughfares, sits beside us in unventilated street cars, and at the hotel table, occupies Pullman sleeping-berths and shares the steamship stateroom, wholly unrestrained and innocently ignorant that he or she may be sowing the seeds of disease among delicate women and children. Any one may verify this who uses his eyes for the purpose along the railway and coastwise steamer routes to our invalid resorts. Within a twelvemonth, on my way to Mexico by rail, I was fellow passenger with two invalids in the advanced stage of phthisis, en route for San Antonio, one of whom occupied the opposite berth, and the other one diagonally across the car, so that I could see and hear them coughing and expectorating, with only such attention as well-intending but unskilled relatives could render. They had no vessels for receiving their sputa, which was discharged in their pocket handkerchiefs, to be scattered over pillows, coverlets and blankets. They left the car in the morning, and I saw those same berths, it is true with change of linen sheets and pillow-cases, but with no change of blankets, mattresses or pillows, occupied that very night by other travelers, who were thus subjected to contact with a pathogenic microbe far more tenacious of life and power of evil-doing than the dreaded cholera spirillum. One has only to sit in a crowded street car on a winter day and watch the clouds of respiratory steam circling from the mouths and nostrils of the unclean and diseased into the mouths and nostrils of the clean and healthy, as the expiratory effort of the one corresponds with the inspiratory act of the other. The road is short but straight and sure from vomica and mucous patch to the receptive nidus in another's body. Who that has ever had forced upon him an aerial feast of cabbage, onions, garlic, alcohol, tobacco and the gastric effluvia of an old debauché can doubt that aqueous vapor can transport microscopic germs by the same route? Not long ago I traveled by sea from New York to Charleston, and for two nights was cabined with some twenty consumptives going to Florida. The air was chill, and they huddled around the stoves and fearfully and fearlessly closed doors and windows, until the atmosphere became stifling with their emanations and the dried sputa, which they ejected on every side. It was comparatively easy to escape during the day by staying on deck, and I slept with my stateroom windows wide open, but the curtains, carpets, pillows and mattresses had been saturated by I know not how many expectorating predecessors. I have visited fifty smallpox patients a day, have gone through yellow fever wards and stood by cholera bedsides with far less apprehension than I experienced on that trip, yet it was one taken by many thousands of people, who would have been terrified to know that there had been a case of cholera within a mile to leeward of their homes. Recall in your several experiences the instances of members of a family, who have occupied the same chamber and bed with a gentle and beloved aunt or sister, and those of tuberculous husbands or wives, who have become ill like them with pulmonary phthisis attributed to everything but the manifest cause.

In former years, I preached a crusade against another virulent communicable disease, in the interest especially of innocent and helpless women and children, and for a time I was gratified to find that husbands and fathers began to realize from the numerous indisputable instances I was able to report, that *syphilis* might be, as it had been, contracted from combs and brushes and rough edged drinking vessels in hotels, sleeping cars and boarding houses, from pens, pencils and paint brushes, that had been held between diseased lips, from dirty, old banknotes, from street vendors' toys, from a lover's kiss, a stranger's caress, or a nurse's ministrations. Supported by an array of cases of infected children, young girls and elderly men and women, the com-

[1] These propositions were unanimously adopted in the form of a resolution in these terms, by the conjoined Sections on Hygiene, Climatology and Demography and Marine Hygiene and Quarantine, and reported to the general session of the Congress, by which it was referred to the International Executive Committee, which returned it with its endorsement and direction that it be transmitted as the view of the Congress to the executives of all the countries represented therein.

mittee of the American Public Health Association, of which I was chairman, advocated the enactment of a law, placing venereal disease in the category of other communicable affections and punishing its transmission as a misdemeanor, but there were too many of the self-righteous blind to these beams in their eyes, who thought it wiser to seek to exterminate by ignoring its existence and never uttering the name of a disease that has done more harm to mankind than all the diphtheria, typhoid, smallpox, measles and scarlet fever, which are so carefully isolated and their statistics so regularly collected and promulgated—a disease that travels with the missionary to Asia, Africa and the Pacific and decimates bodies faster than he can whiten souls.

I do not expect that all who have eyes will see as I do, or having ears hearken to what I say. The idle and perverse generation of the first century will have its following in the twentieth, and men and women will continue to do the insanitary things they ought not to do, and leave undone the sanitary precautions they ought to take despite our warning, our imploring, our advice or our denunciation. However benevolent and beneficent the hygienist's aim, this unappreciated, unrequited and often unprofitable labor is enough to deter him from what has been derisively described as only an effort to procure the survival of the unfit—and thus thwart Nature's own attempt to rid the world of them. He encounters another obstacle to success as aggravating as the disbelief in the necessity for his work. The authorities listen to his warnings and then employ their own perfunctory and superficial methods of protection. Told that absolute cleanliness is the fundamental fact of sanitation, street-cleaners are set at work brushing the surface dirt into little heaps, which passing vehicles again distribute or the winds carry into the opened windows of adjacent residences. The refuse of the household is deposited in vessels on the sidewalks of crowded thoroughfares to be emptied after a time into collecting carts, from which clouds of dust envelop passers and circulate back into the houses—*living* dust, for Manfredi found an average of 761,521,000 microbes to the gram of the street dirt of Naples, from which he cultivated pus, malignant œdema, tetanus, tubercle and septicemia. Swarms of flies feed on the decomposing contents of exposed garden pans and buckets and carry their tiny germ laden booty into the butcher shop of the poor and the kitchen of the millionaire. Who can dispute that if the hair of the Newfoundland dog could transport yellow fever to a distant Mississippi town, and a newspaper printed in an Ohio village where smallpox was raging, could fatally infect a United States Consul in a foreign port where the disease did not exist, that a cloud of dirt, a swarm of flies, or a single fly, as Sawtschenko, Simonds and Sternberg demonstrate, can disseminate cholera and become a focus of infection, which ordinary precaution to cover and destroy the discharges and excreta of those already sick would have made impossible? Cities are reported clean whose sanitary inspectors have merely walked through crowded tenements, a hundred or more a day, and been satisfied with external evidences of brush and broom, leaving carpets and rugs unlifted, pieces of heavy furniture, with the fluff of years behind and beneath, unmoved; and closets, cupboards, pantries, storerooms, attics and cellars undisturbed. The cellars of our great cities, and I speak with personal knowledge of many in New York, Brooklyn and Philadelphia, are greater abomination than even filthy living apartments.

The *New York Herald* of the 8th August, narrating the death of two children by falling from a window on the fourth floor of a tenement house at 204 West 61st Street, said: "To get at the bodies of her children the frantic mother had to go through the cellar of the house. There she waded through indescribable filth, almost knee deep to where her children lay, when the foul odors overcame her and she fainted." It added: "The sanitary superintendent issued an order that the cellar must be cleaned out within twenty-four hours." Do you believe that it was the only one of its kind that needed cleaning? No city can be accounted clean until its ordinances require every cellar door to be widely opened to the sun and air—that royal pair of germicides—every cellar to be emptied of its refuse, every cellar wall and ceiling to be scraped and whitewashed, every cellar floor to be taken up if rotted and sprinkled with lime if uncovered, a tedious and expensive process, but effective sanitation, costly as it must needs be, is cheap beside the outlay of a single epidemic. There are underground foulnesses in all our great cities, of which they should be rid at any cost, as where rag-pickers and bone-gatherers collect their filthy stores, and Italian street-corner fruit sellers keep their decomposing bananas, grapes and oranges, till rubbed off by dirty pocket handkerchiefs they are exposed for sale, glistening after their repulsive polish with impure saliva. If some mote hunter, loth to find so huge a beam, chooses to find solace in disbelief, I might be able to shock him by declaring that I have seen the figs he munches unconcernedly, flattened in their pretty boxes in a country where syphilis reigns, by questionable thumbs moistened by equally suspicious saliva. Shall I, while revealing insanitary horrors, dare lift the sweeping train of the fair promenader, fashioned after that of women in other countries who never walk upon the streets, and show the nasty mess of spittle, excreta, mud and dust she gathers from the sidewalks upon her white skirts and silk stockings? She will not believe me, but the bacteriologist, who scoops the mud from between the cobble stones of the streets to find it swarming with microscopic life, can gather as rich a harvest of microbes from these same dainty undergarments.

Nor are these the only beams we overlook in our search for motes. Dr. Graham, bacteriologist of Starling Medical College, in response to an official inquiry by a member of Congress, reported that he was able to obtain thirteen colonies of two kinds of bacteria from one dirty, worn banknote, and the *Medical Record* of 21st of January of this year, states that a British bacteriologist discovered 19,000 microbes, including those of tuberculosis, diphtheria and scarlatina vegetating upon a single note.

Other harborers of morbific germs are the textile fabrics employed in the furnishing of street cars and stages, which the chairman of the Sanitary Committee of the New York Board of Health reports as "a menace to public health by reason of their continual exposure to uncleanness and infection from the clothing of diseased and filthy passengers," which, like their grimy bodies, may be foul with the sputa of diphtheria, tuberculosis or syphilis, the desquamations of scarlatina, measles or erysipelas, the ema-

nations of typhus or the alvine discharges of cholera or dysentery. A commendable league of zealous ladies, who are seeking to prevent the abominable practice of expectorating in public vehicles, induced a few car companies to display placards, to the effect that "gentlemen are requested not to spit on the floors," but these appeals intended for beasts, who were never gentlemen, were hung in inconspicuous places or covered by other notices, and the spitters continued to discharge their syphilitic and tubercular sputa on the floor mats to be taken on ladies' petticoats and carried to their homes. The spitter and the other beast, who voids his nasal secretions where it suits him, are largely responsible for the spread of influenza, for, according to Pfeiffer, the discoverer of its bacillus, "its contagion is found in the moist secretions of acute cases in the discharges from the nasal and bronchial mucous membranes."

Further detail would be out of place in an introductory address to this Section. Let it suffice to point to the fragile spirillum of cholera, which we are exorcising by "bell, book and candle" as illustrating the dreadful *motes* of my text, and to the sturdy robust bacillus of tubercle as the *beam* we will not consider. "Cholera," says Ernest Hart, "can only be drunk and eaten. It can not be caught and breathed;" but the tubercular mischief-maker, who finds the ever open door of the respiratory passages his readiest approach, may also enter at any or all the orifices of the body. Among one thousand autopsies, Osler found 275 with tuberculosis; among 8,873 patients in the surgical clinic at Wurzburg, one-seventh (1,227) were tuberculous; the necroscopic statistics of Harris and others "show that one-third, perhaps over one-half, of the people who live to middle age, have some form of tubercular infection; and Dr. Williams of Johns Hopkins' Hospital estimates that tuberculosis of the female generative organs is four times more frequent than generally supposed." (*Medical Record*, March 18.) Can any more obvious method of direct infection in these cases be imagined than the trailing skirts of women gathering tubercular sputa from the pavements?

The sanitary inspector is destined to become the most important agent of future civic administration. The perfunctory burning of a pan of sulphur in a diphtheritic chamber, the sprinkling here and there of a solution of corrosive sublimate, or the substitution of the sweeter scent of thymol, pinol or some newer "ol" for the foul odor of the privy will not then be the tolerated limit of this interference. All that science teaches and all that intelligence can devise will be exacted of him. A sanitary inspection will be a deliberate, painstaking, critical examination of nooks and corners and their disinfection, the flooding of the lairs of microscopic motes and the deluging of unsightly beams with those unstoppled, unpatented, inexhaustible germicides, air and sunshine.

Coincident with the approaching Eleventh International Medical Congress at Rome and its fitting complement, there is to be an Exposition of Medicine and Hygiene, and significant of the share accorded sanitary science in a Medical Congress representing the highest modern professional attainment, it will be noticed that of the *ten* classes which in their ensemble make up the Exposition, *five* are exclusively hygienic, to-wit:

4. Plans, models and *matériel* bearing on school management and sanitary civic organization (*riordinamento urbano*).
6. Plans, models and *matériel* for hygienic constructions.
7. Apparatus and furniture for hygienic uses in the interior of common dwelling houses and public offices on every scale.
8. *Matériel*, appliances and accommodations for the practice of personal hygiene; and
9. Plans, models and appliances for the hygiene of the working classes.

Three are partly hygienic, to-wit:

1. Apparatus, *matériel* and plans of buildings for scientific and technical investigation in therapeutics, biology and hygiene.
3. Articles and appurtenances requisite in salvage service and in *assistance publique;* and
10. Books, atlases, photographs and such like, recently published and having reference to the medical, biologic and hygienic sciences.

Two only of the ten are exclusively medical and surgical, to-wit:

2. Apparatus, instruments and *matériel thérapeutique* in the various departments of medicine; and
5. Plans, apparatus and furniture for the purposes of the divisional surgeon in cities. Additional to these, special classes are devoted to hydrology and balneo-therapy, and to the Italian Red Cross Society, both of which are practical outcomes of sanitary endeavor.

I do not forget that climatology and demography, as well as hygiene, are within the purview of this Section, but what are climatology and climato-therapy but applied hygiene; and what demography but the demonstration of the results among masses of people of sanitary or unsanitary conditions? The climatologist is of necessity a hygiologist. The materia medica and pharmacopœia are not his text-books. Physical geography, meteorology, hydrology, balneology are his scriptures and gospels. The vivifying light, invigorating air and healing springs and waters his armamenta, his anodynes and hypnotics, his roborants and entrophics, his alterants and excernents. The high professional standing of the American Climatological Association, one of the constituent bodies of the Congress of American Physicians and Surgeons, and the distinguished climatologists who are with us to-day and who are conspicuous in every International Congress of Hygiene, are evidences of the place in medicine of climato-therapy, the practical end of medical climatology; that broad specialty which robs so many graves of untimely victims and makes so many heretofore without hope able, if not to take up their beds, at least to get out of them, and walk. The field of the climatologist is broad as the habitable surface of the globe—in the high altitudes of Colorado and the Alps; in the odorous pine forests of Norway and the Carolinas; on the sea shore or upon the wide waste of waters and their islet oases swept by ocean breezes.

Our American vital statistics are not yet piled high enough to form the foundation for a substantial superstructure of demography. The great caldron in which we are mixing Celts and Saxons, Semites and Aryans, with a seasoning of syphilis, tuberculosis and insanity, is simmering, with what ultimate homogeneity can only be conjectured. When immigration was a tiny stream, however muddy and noisome, poured into a rapid river of pure water, it was soon lost in the crystal fluid; but now that huge sewers are discharging their fetid pestilential torrents into a placid lake that has no outlet, the lake itself becomes turbid and unclean. Already, in the *cul-de-sacs* which are nearest the open mouths of these foul sewers and receive their floating scum—the pris-

ons, reformatories, almshouses, insane asylums and hospitals—this filthy, debased and diseased foreign element is ascendant, and our demographers have a simple task in representing its volume by numerical statistics. Dr. Frederick H. Wines, the distinguished compiler of this portion of the census of the United States for 1890, demonstrates by the indisputable evidence of figures that while the foreign born constitute only 17 per centum of our total white population, in round numbers about one-sixth, yet they furnish over one-half of all the paupers in the almshouses of the country. It is evident that the traits of the Saxon are disappearing from our National complexion, and if the proper solution of the negro question be, as suggested by certain prominent Afro-Americans, to bleach it out by admixture, we may expect the hue of our descendants to be decidedly tawny.

The most zealous demographers of this decade are the French, who have been spurred in their statistical researches to discover the causes of the too evident depopulation of France of its native races. But are we not again refusing to consider the beam in our own eyes in not giving heed to the operation of similar conditions in our own country? Dr. Billings announces that our birth rate has fallen from thirty-six per thousand inhabitants in 1880 to thirty-one per thousand in 1890. The twenty to thirty children of our ancestors, the dozen or more of our great-grandmothers, have dwindled progressively to five or six, then to three or four, until to-day one or two or none represent the fecundity of the educated classes. The *Independent*, referring to New England Puritan life, says:

"Large families abounded. According to Cotton Mather' one woman had twenty-two children, another twenty-three by one husband, and a third was mother to seven and twenty. Sir William Phipps was one of twenty-six children of the same mother. Printer Green had thirty. The Reverend John Sherman of Watertown had twenty-six children by two wives, the second spouse the mother of twenty. The Reverend Samuel Willard, the first minister of Groton, had twenty children, being himself one of seventeen, as was Benjamin Franklin."

The paragraphist who can now record the case of the woman of 31 at Cold Spring who has become the mother of seventeen children in nine years, or that of the Georgia matron of 25 who rejoices in thirteen, has, in newspaper parlance, "a great find." The spectacle of impending maternity among our better classes is becoming more and more rare, and still more rare that of an infant nursing at its mother's breast. Only in the squalid quarters and purlieus of our great cities where the English language is not spoken, among imported lazzaroni and the overflow of Italian ghettos, does the process of human incubation go on as God and Nature intended. The laws of creation are immutable, and one has but to look beneath the disfigurement of female dress to recognize the evidences of imperfect physical development—in stooping unsymmetrical shoulders, in meager limbs, in narrow pelves and flattened busts. Dr. Dr. Otis exhibited at the recent meeting of the American Climatological Association in illustration of the diametric measurements of the thorax, the profiles of a number of female chests which were supposed to be those of little girls until he explained that they were the contours of nubile young women in Boston normal schools, like her whom Solomon bewails in the Song of Songs: "We have a little sister and she hath no breasts: what shall we do for our little sister in the time when she shall be spoken for?" My friend, Dr. Robert T. Morris of New York, has called attention to the fact that eighty per centum of all Aryan-American women have rudimentary clitorides and asks if evolution is trying to do away with this organ in the degenerative changes characteristic of highly civilized varieties of the *homo sapiens*, of which early falling hair, decaying teeth, weak mammary glands and badly balanced eye muscles are other examples. Is the sexual instinct losing its potency as a maternal factor? Is marriage only a social office for the display of finery on the bride and bridesmaids and the entertainment of crowds of gaping strangers? Is the virgin wife best prepared for conception by months of preliminary sur-excitation and feverish anxiety, and is a fatiguing railroad journey the best prelude to an act which should lead to the inception of a human being, the incarnation of a human soul? Has the function of reproduction come to be regarded only as a bestial concomitant of matrimony, and lactation its vulgar indecent supplement, and is all this attributable to physical deterioration shown by the undeveloped or imprisoned *mentula muliebris* and atrophied mammæ, and how far is this the explanation of the diminished fecundity of the Aryan-American woman? These are problems as interesting to our demographers as the depopulation of France, the disappearance of South Sea Islanders, the migration of Semitic and Mongolian races, and the effects of mal-nutrition on the indigenes of Ireland and Russia.

But, gentlemen, I shall no longer trench upon time that belongs to you. I am highly gratified at your presence and thank you most cordially for your kind attention.

NOTE.—The remainder of the address was delivered in Spanish, of which the following is a translation:

Gentlemen, our Friends and Colleagues from Abroad:—Permit me, on the part of the members of this Section from the United States of America, to tender you a most hearty welcome to our capital. Your long travel to this city bespeaks your interest in the occasion. It is no light boast that here for the first time in its history, the medical profession of all America finds itself united in one great Congress. It was about nine years ago that a number of Canadian sanitarians claimed the right as Americans to become members of the American Public Health Association, and it was my privilege as president of that body to receive them as such. The subsequent transactions of that Association show how loyal they have been to its traditions, how zealously they have participated in its work and with what dignity they have filled its highest offices. Two years later they carried the Association into their own territory at Toronto.

In 1890, two distinguished representatives of the Supreme Council of Health of our sister republic of Mexico came to Charleston and, as Americans, likewise knocked at the door of the American Public Health Association, returning the following year in such numbers and with such a hearty welcome from their government to meet in their own capital that the invitation was accepted, and the most successful meeting of the Association, the twentieth in its history, was held in the ancient city of the Toltecs. To-day the roll of States represented in the Advisory Council shows Illinois, Massachusetts and Tennessee; Ontario, Quebec and Manitoba; Guanajuato, Querétaro and Zacatecas in one fraternal union.

What sanitarians have done in that Association, which bears the escutcheons of its three constituent countries, side by side, this Congress aims to accomplish for the whole profession of medicine in the Western Hemisphere, uniting its members in one brotherhood, whatever their race or language, and whether their homes be on the frozen shores of the Arctic or the hillsides of Tierra del Fuego, among Greenland's icy mountains, in the archipelago of the West Indies or amid the perennial gardens of Hawaii.

Physicians and brothers from the United States of All America, welcome to this your capital, which, in that sweetest language spoken by human tongues, *pongamos á vuestra disposicion.*

Medico-legal Photography.—One of the recent inventions in photographic science is exhibited in the French building at the World's Fair. It consists of a reversible camera, with a special tripod enabling the operator to photograph a corpse and the surrounding area of ground in the proper perspective to an extent of about eight feet square. The tripod is placed over the object and focusing is obtained by means of a mirror at the back of the camera with an angle of 45 degrees. By this method the condition of the ground and contiguous objects in their most minute details are fixed upon the sensitized plate.

CHOLERA; ITS NATURE AND ITS CURE.

BY HENRY RAYMOND ROGERS, M.D.
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"We have no better means of combating the cholera to-day than at any time since it became known to civilization, a thousand years ago," said a distinguished physician in a recent number of the *Review of Reviews*. The medical profession therefore stands confronted with the appalling fact that hitherto all theories of this disease have been so misleading, and all forms of treatment have proved so worthless, that longer to trust them would be little less than criminal. Better theories and practice are urgently demanded.

The bacillus theory of Dr. Robert Koch, which was so eagerly grasped at, is now found to be fallacious. Dr. Koch himself admits that comma-shaped germs are found in the common diarrheas of summer everywhere, and he tells us: "Water, from whatever source, very frequently, not to say invariably, contains comma-shaped organisms." He is not ignorant of the fact that these bacilli are found in the secretions of the mouth and throat of healthy persons and in the dejections of hardened fecal matters. Dr. Koch also knows full well that Drs. Pettenkofer of Munich, and Emmerich of Berlin, two of the most distinguished members of the medical profession of to-day, and experts in this disease, drank each a cubic centimeter of "*culture broth*" containing these pathogenic bacilli without experiencing a single characteristic symptom of cholera, though the draught in each case was followed by liquid stools swarming with these germs. Hasterlik reports six cases of the same kind without any apparent results. The utter worthlessness of Dr. Koch's comma bacillus as diagnostic evidence of this disease is thus fully demonstrated.

As the result of a personal experience in every epidemic of this disease in our country since 1851, together with an experience of its effects upon my own person and a success in its treatment quite phenomenal, I am prepared to assert that cholera need be no longer the dread and scourge which hitherto it has been.

It is strange that a new philosophy of this disease which must revolutionize its theories and its treatment is now found where it never before has been sought for, but where alone it is possible to find it, viz: in the right interpretation of the symptoms which characterize the disease. This philosophy not only reveals the essential nature of this disease, but points unerringly to a more successful treatment.

The symptom of most vital importance, and the only one which is pathognomonic, is the watery exudations which find their way so profusely through stomach and intestines and skin. In fact, all other symptoms which follow this one have their origin *in it*, since, in the entire absence of *this*, neither of the others can have an existence. The most vital consequences, therefore, depend upon the right appreciation of this symptom, together with the promptness and efficiency with which its indications for treatment are carried out. This watery element is constituted of the serous element of the blood, and comes from every part and portion of the system.

The question now arises, by what process does this rapid separation of the finer element of the blood from the coarser take place? The nerves of the system, when in their normal condition, preside over and maintain the tonicity of every organ, vessel and tissue of the body. They control the functions and processes of every part. The rapid filtration of the watery element of the blood through the now loose and patulous walls of the blood vessels indicates a loss of tonicity on the part of the nerves which permeate those walls. On account of such weakened condition of the walls of the blood vessels a general serous outflow pours from every vein and venule of the body, and the great life current is thus robbed to supply these so-called rice water discharges. At the same time the weakened vessel-walls contract with diminished force upon their remaining contents, and consequently the brain and heart fail of an adequate supply, and the more fatal symptoms and death follow. Such is the secret of the disease and its rapid and phenomenal fatality.

The rapid abstraction of a single element of the blood becomes disastrous in the same manner as when the full blood itself is lost in the more common forms of hemorrhage. It is, therefore, passing strange that this rice water phenomenon never has been recognized as a hemorrhage, with all that such a hemorrhage implies. All symptoms and conditions incident to this disease, as also the changes observed upon the cadaver, are explainable upon the hypothesis of actual hemorrhage; and we are warranted in saying, *only* upon that hypothesis.

Owing to the failure to discriminate between the actions of the red corpuscles of the blood and its white discs, its chief constituents, this hemorrhage hypothesis has not been applied in explanation of this disease. The vital forces of the system depend largely upon the action of the red corpuscles, for through these chiefly are effected the oxygenation of the blood and the consequent revitalization of the system. A small loss of this element may become quickly fatal. On the other hand, the serum or white element which constitutes the bulk of the blood performs less vital functions, and its abstraction becomes neither so quickly nor so seriously manifest. In this disease enormous quantities are sometimes separated from the circulating current without fatal consequences.

Treatment.—Since the disease is essentially a neurosis, and its controlling symptom a hemorrhage, its treatment becomes at once clearly defined, and the pure empiricism of the past must give place to a scientific treatment with vastly improved results. We must look upon the cholera hemorrhage as subject to the same general principles of treatment as other hemorrhages.

As the cholera hemorrhage occurs over so large a portion of the body, is colorless, and therefore virtually a *concealed* hemorrhage with all that is alarming which that word implies, it calls for attentions at once prompt, efficient and watchful. No painless diarrhea or painless vomiting is free from danger during a cholera epidemic, since the milder conditions of the disease often quickly change to those more grave and fatal.

Both the principles and the practice of medical science teach that position, *position*, POSITION, is the prime safeguard in sudden and profuse hemorrhages occurring from any cause. In the treatment of cholera hemorrhage, position with the body horizontal or with the head the lowest, is quite as indispensable as in that arising from any other cause.

Position in the treatment of cholera is not simply a repose in bed with the head resting comfortably upon the pillow, and raised or lowered at the pleasure or caprice of the patient; but to be efficacious, as in its graver cases, it must be *compulsory*, and strictly maintained, *as for the very life*, until the danger period is passed. The vital necessity of position in the treatment of cholera is shown by Murray, Cunningham and other distinguished authorities when they tell us that "once sitting upright in bed sometimes causes death in this disease." Not even in the act of evacuation of the bowels should the head be raised in the more serious cases. But position in this disease is sometimes difficult to secure, as the patient, when weakened by exhaustive discharges and pain, becomes disturbed in intellect and is with difficulty controlled.

If the best results are sought for, the horizontal position should be enforced in every case of even suspected cholera. In cases of great danger the body should be inclined with the head the lowest. This position should be maintained until the blood vessels contract upon their contents, which fact is shown by an improved condition of the pulse.

In the present condition of medical science, opium and its preparations stand far above other remedies which may be employed in the treatment of this disease. No remedy is known which surpasses this one in the power to change the perturbed condition of the nervous system and close up the diminutive avenues through which the watery element of the blood and the life ebb away together. During an epidemic it is hazardous to rely upon remedies taken through the mouth, since in cholera the action of the mucous membrane often becomes changed, so that internal remedies either fail to act or are ejected. Moments are sometimes precious, as a life may depend upon the certainty of retention of a remedy and the promptness and efficiency with which it may act. The hypodermic method is here our best resource. According to the reports of cases in Asia, Australia and elsewhere, the hypodermic use of morphia has shown almost uniformly favorable results; the one-eighth to the one-sixth of a grain of the latter very rarely need be exceeded or frequently repeated. Opium and morphia *in large doses* are decidedly contra indicated *in any of its stages;* since, if these drugs are retained in the stomach, they may become cumulative and in the case of reaction they might become fatal.

For the relief of the atrocious cramps, the administration of chloroform by inhalation, together with small doses of morphia hypodermically applied, offers the most speedy and effectual means at our command. The stimulation of the brain by currents of blood sent to that organ by *position*, wonderfully facilitates the control of the cramps.

For excessive thirst, ice may be given ad libitum; and if ice can not be obtained, the coldest water in small quantities and frequently repeated. The suffering from thirst in this disease is inconceivable, and it is unjustifiable, unmitigated cruelty to withhold these necessaries from the sufferer. Ice has been given freely in *every* case under my charge, and with the happiest effects.

The circulation should be promoted by the application of heat and friction to the extremities. Any further treatment may be conducted upon general principles.

En résumé: This disease, so destructive to human life, is thus found to be most simple in its character and positive in its indications for treatment. As a problem in medical science, cholera resolves itself into a question of supply of blood to the brain and heart. If this supply be kept up, a fatal termination to this disease is not probable. Whatever course will best promote this end, therefore, must secure the most favorable results in its treatment.

The inestimable value of *position* as the fundamental idea in the treatment of cholera was first exemplified upon my own person in 1854, and has been abundantly demonstrated in the epidemics which have since occurred.

The simple theory herein advanced is found in entire harmony with the highest principles and practice of the advanced medical science of to-day. It offers results such as never yet have been realized, and places within the reach of all a ready method of treatment. This treatment may be successfully employed even without the use of medicines.

In fine, in the light of the study of this disease during forty years, both at home and abroad, such as few have had either the opportunity or the inclination to pursue, and in view of the phenomenally favorable results of treatment based upon this philosophy, I believe myself fully warranted in asserting that the rate of mortality of this scourge may be reduced to less than half of that at which it confessedly stands to-day.

The foregoing theories have been presented by the writer before the American Medical Association, the New York State Medical Societies and the Chautauqua County (N. Y.) Medical Society; also through the columns of the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, the *Chicago Medical and Surgical Journal*, and the *Quarterly Epitome of Practical Medicine and Surgery*.

NECROLOGY.

A Famous Irish Surgeon Dead—Dr. T. H. Parke, who Accompanied Stanley through Africa.—Dr. Thomas Heazle Parke, a distinguished surgeon, and one of Stanley's most intimate and beloved companions in the latter's trip across Africa in 1887–88–89, is dead. He was an Irishman, his birthplace being Ologher House, Drumona, County Tyrone. Dr. Parke was only thirty-six years old at the time of his death.

He was commissioned as surgeon in the medical staff of the British Army in 1881, and from that time onward his life was spent in active service abroad. The following year he was in the Egyptian campaign and received the Queen's medal and the Khedive's star. He then went through the cholera epidemic in 1883, and afterwards was in the Nile campaign for the relief of Gordon. Dr. Parke was present at the battle of Abu-Klea, the action of Gubart and other engagements. He went across the Bayudu Desert in medical charge of the naval brigade under Lord Charles Beresford and returned in medical charge of the Guards camel corps under Lord Falmouth.

ACROSS AFRICA WITH STANLEY.

Subsequently he crossed Africa with Stanley in 1887–88–89, and when he returned received many honors from societies, his government and the Khedive. He was put in command of a company of the detachment under Major Bartellot, which sailed up the Congo on the steamer *Stanley*. At one point of the journey, at Ipoto, Dr. Parke was practically in the power of the natives. He and his companions, separated from the main body, suffered severely from want of food.

In 1888, when at Fort Bodo, Stanley fell ill of sub-acute gastritis, he pulled him through. After this he insisted upon accompanying Stanley to the Nyanza. In the following year Dr. Parke was himself stricken down. But while suffering from fever he arose from his sick bed to minister to other invalids. When Emin Pasha was found and met with his accident, Dr. Parke attended him successfully.

It is told of Dr. Parke that when he found Lieutenant Stairs wounded by the poisoned arrow shot by the hostile natives of the Aruwimi forest, he sucked the poison from the wound.

Stanley, in his work "In Darkest Africa," gives high praise to Dr. Parke for his invaluable services and his fine character.

Dr. William Thomas White, editor for many years of the *New York Medical Register*, died September 17, 1893. He was born in Richmond, Maine, in July, 1829. He was a graduate of the New York Medical College in 1855, being a protegé and afterwards assistant to that other distinguished Maine man, the late Dr. E. R. Peaslee. He served as house surgeon to the Ward's Island hospitals for a time, going thence to the Isthmus of Panama as surgeon to the railroad. He returned to New York after an absence of eight or nine years and at once identified himself with the Academy of Medicine, the American Medical Association and others of the best organizations. He was secretary of the Academy, five years later, serving in that capacity for eight years. He was an ex-president of the Medico-Historical Society and Medical Association of New York County. His positions on the staff of the Demilt Dispensary of the Presbyterian Hospital of Charity on Blackwell's Island and of the Veterinary Surgeons College, were well and honorably administered, and some of them were held down to the time of his demise. Dr. White's membership in the American Medical Association dates from 1866. He was one of the charter members of the great New York State Medical Association, now grown to a membership of 800, and the success of the body was very near his heart. The cause of his death was referable to cardiac hypertrophy and its sequelæ.

Dr. Seth Rogers of Pomfret, Conn., died Aug. 6, aged 70 years. He was the twelfth son of a Vermont farmer and won his way into the medical profession by dint of perseverance, as well as a conflict with disabling ill health. He was a man of Quaker parentage and an anti-slavery advocate before the breaking out of the war. In 1862, he took the office of surgeon to a colored regiment, organized by Col. Thomas W. Higginson, the First South Carolina Volunteers. His medical education was partly obtained at the New York University and partly at the Castleton school. He also studied for a time in Paris under Trousseau and Valleix. He visited South America in 1858 for the sake of his health. Worcester, Mass., was his home during the earlier years of his career. In 1863, he was obliged by illness to leave the army, and he went to Pomfret in order to follow an outdoor life on a farm. He was able to establish a winter practice in Florida for a dozen years, and cared for patients at his own house in Pomfret during the summer months. Although his life was one long conflict with the *res augusta domi* and with ill health, he was a character of so much vitality and courage that he has left a record bright with honorable accomplishment.

Dudley S. Brainard, died at Osage, Iowa, Saturday, Sept. 9, 1893. Dr. Brainard was born in Williamsburg, N. Y., now a part of Brooklyn, Jan. 3, 1851, and came to Wisconsin with his parents in 1861; six years later they removed to Zumbrota, Minn. He received his medical education at the University of Buffalo, N. Y., graduating Feb. 23, 1875. After practicing a short time in Minnesota and Wisconsin he removed in 1879 to Stacyville, Iowa, where he resided until a short time before his death.

Dr. Brainard prized his profession highly and was regarded as one of the strongest men in regular medicine in Northern Iowa. At the time of his death he was a member in good standing in the county, State and American Medical Associations. He was a faithful attendant at the meetings of these societies, contributing frequently papers which were listened to with interest.

Dr. Brainard was married in 1876, and his estimable wife and two children survive him.

His memory will long be held in loving esteem among those who knew him as a faithful physician, a loyal friend, a noble man, and a Christian.

Dr. Edwin N. Colt of Brooklyn, died on the 15th inst., after a period of sixty years of almost uninterrupted family practice. He was the *doyen* of the medical faculty of his town, and it is said that there are only two survivors in New York State whose dates of graduation antedated that of Dr. Colt. He was a native of Berkshire County, Mass., having been born there on August 7, 1811. He was a graduate of the old Berkshire school, in the year 1832. He was highly honored by the community in which he lived.

Dr. Philemon Hommell of Jersey City died suddenly September 14, aged 57 years. He was an Alsatian by birth and a Parisian by education. He studied pharmacy at Paris and became the pharmacist to the Hôtel Dieu, following his father and grandfather in the first choice of a profession. Having come to America, circumstances led him to study medicine and about 1882 he obtained his doctorate. He was successful in practice, and at the time of his death was a visiting physician to the Jersey City Hospital. His death was due to pulmonary hemorrhage.

Dr. Austin K. Gould of Worcester, Mass., died Sept. 9, aged 67. He was in the volunteer medical corps during the war of the rebellion as surgeon.

He was placed in charge of one of the division hospitals at Wilderness Run. Here he was captured by the confederates and for nine months languished in the prisons of Andersonville, Florence and Charleston.

In the latter place he was for nine days under a continual fire from the Union batteries.

Prof. Lyman Bartlett How, M.D., of Manchester, died in Hanover, N. H., Sept. 15, of consumption. He graduated from Dartmouth in 1860, and from the medical department in 1863. He had been Professor of Anatomy at Dartmouth for twenty-five years, and held the place until this year, when failing health compelled him to give it up. Dr. How was 55 years old, and leaves a widow and two children.

Dr. Horatio Nelson Page of Chelsea, Mass., aged 87 years died on the 16th at the residence of his son-in-law, Charles E. Reed, in Milwaukee. Dr. Page was well known in the East, having practiced at Chelsea and Bangor, Me., for many years.

Dr. Joel Henry Cooper, father of Congressman H. A. Cooper died at his home in Burlington, Vt., aged 70 years. He was born in Windsor County, Vt., and went to Burlington in 1845, practicing medicine until his retirement about ten years ago.

Dr. W. H. Galt, health officer of the city of Louisville for the last twelve years, died suddenly Sept. 14, of "blood poisoning." He was 66 years of age and one of the best known physicians in the State.

Dr. E. P. Long, past grand master-at-arms of the Knights of Pythias of Wisconsin, died Sept. 8, at his home in Black River Falls, Wis., after a prolonged illness.

Dr. Frank W. Brown, of 51 Eliot Street, Detroit, Mich., died Sept. 9. He was a son-in-law of the late John J. Bagley and his father was a physician of that city.

Dr. William P. Buck, who was surgeon of the old Eighth Illinois Infantry during the war, died Sept. 15 at his home at Mowequa, Ill.

Dr. Abram Simmons of Cohoes, N. Y., died at that city on the 12th.

Dr. John L. Galliver of Toledo, died Sept. 18, 1893.

Dr. Edward Warren Bey of Paris, died in that city Sept. 16.

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SATURDAY, SEPTEMBER 30, 1893.

THE SEASON OF THE STUDENT.

Let those study who never studied before.
Let those who always studied, now study the more.

The annual pilgrimage of the medical students has commenced; some returning from summer semester with renewed health and vigor, others fresh from academy in pursuit of a new branch of science; and all classes full of enthusiasm and bold resolve. The dingy old college looks well to these youths, for in its walls are stored the paraphernalia of the amphitheater, the laboratory and the clinique. Even the musty jokes of the professors seem to have penetrated the cracks and crevices about the lecture rooms, which seem to be smiling softly to themselves as the eye of the neophyte rests upon them.

But no one better than the medical student, knows that there is a serious side to his life. He may have a rollicking, devil-may-care expression at the beginning of the term, but he knows that there are pains and penalties as well as prizes on examination days, and the former are as two to one.

The student has changed from the days of fifty years ago. Then, as a rule, he forsook the plow to follow a preceptor for six months immediately preceding the opening of the college term. He kept calls, studied anatomy in a desultory way, and occasionally assisted his preceptor in important cases. He then came to college with a fair knowledge of the routine life he intended to lead, he listened to many daily orations through the allotted period, and in a very short time received the engrossed parchment that authorized him to respectively save or slay according to his ability on the one hand, or blundering propensities on the other. Those days have passed for the American student; he may have less native keenness than his predecessor, but he has vastly more collateral knowledge. He is compelled to show evidence of previous academical study upon entrance, and there is a strong probability that should he cut the recitation room, he will be necessarily absent on Commencement Day.

The pedagogue, too, has changed with the times; he no longer cultivates oratory, but the details of the branch intrusted to him; his speech is seldom studied, but his ideas are those born of intimate study of the subject in hand, and more than that, the fruit of a greater experience than that of his predecessors. The great increase in population has multiplied hospitals and dispensaries, until there is now little lack of opportunity for study of actual cases of any particular affection. The scientific pedagogue endeavors to allure and attract the students by class experiments and demonstrations. These have taken the place of the anecdotes that were used by all the old time professors. Our student must have his knowledge completely digested by the end of the term, so thoroughly mixed and incorporated into himself that it is his own. If he disgorges it whole, in the examination room, he will be through life a mental dyspeptic. The thorough assimilation of the knowledge poured into him also stimulates originality. "Bees," says MONTAIGNE, "cull their several sweets from this flower and that blossom, here and there where they find them, but afterwards themselves make the honey, which is all and purely their own, and no longer thyme and marjory." The modern method of teaching seeks to instil in the mind of the student the general principles of sincerity of purpose, attention to the lecturers and demonstrators; and a true student will learn modesty from the history of the art. The student also soon learns that cultivated eccentricities of manner and speech are no longer a passport to the highest standing in his class. He will gain much from the diversity of opinions he may hear expressed in the lecture rooms, and if he be wise he will follow the opinions that seem founded on reason. He will remember that the Republic of letters is a Republic and not a kingdom; for there is no king. He only commands who has reason on his side.

Few departments of the medical college are more useful than the quiz, which is not only invaluable to the student, but is made use of by the instructor to gauge the capacity of his pupils; as a young horse is brought out and exercised by his trainer, that the one may be made faster and stronger by exercise, and the other may know his gait, speed and peculiarities. But the quiz master should be entertaining and engaging in manner; the quiz "driver" is an unmitigated nuisance.

The student, to be successful, must avoid excesses, keep healthy and pay due attention to exercise while storing his mind; remembering the saying of PLATO that one must form not only a mind, and not only a body, but both a mind and a body, to become a MAN.

THE AMERICAN ELECTRO-THERAPEUTIC ASSOCIATION.

No greater evidence of the altered position of electricity as a remedial agent need be sought than the character of the attendance and discussions at the recent meeting of the Association in Chicago. The interested participants seemed equally divided between those who were avowed specialists of National reputation and those whose standpoint was that of the general practitioner, and it was easy to see that both the speakers and hearers appreciated the educational value of the occasion. The two days' discussion on the character of coils, induced currents, and the new sinusoidal currents produced by specially constructed dynamos, and as well the discussion on fibroid tumors and individual papers showed scientific qualities unsurpassed in any other National organization. It showed also that such technical, though practical, subjects could not be adequately considered in any other medical organization than one devoted to electro-therapeutics or in a special section of our own great ASSOCIATION.

The organization of this Association was due to the combined labors of BETTON MASSEY, GOELET and WM. JAMES MORTON, names all standing for what is best in the newer electro-therapeutics. To them the profession are indebted for this most important step in the rescue of electro-therapeutics from empiricism and the ascertainment of a scientific basis for its claims.

Blatant quackery had already been relegated to as quiescent a position as the ever-gullible public will permit, but the work cut out for an association devoted to medical electricity was even more difficult; it was the rescue of the remedy from the hands of its avowed friends—men who intrusted a noble agency to unskilled assistants and nurses. REMAK, ERB and DUCHENNE DE BOULOGNE builded well the foundation of modern electro-therapeutics, but so much can not be said for CHARCOT, who, great as he was, was responsible for a school of "impressionists" largely recruited among French and American neurologists, whose influence was distinctly inimical to scientific electro-therapeutics.

To APOSTOLI is due the modern revival of the physical methods of ERB, and as the field of their application now invaded gynecology and other departments capable of direct study and materialistic demonstration, it became finally possible for the questions involved to be discussed by believers in mere natural phenomena rather than mysticists.

As physical questions, involving the application of measured quantities and known qualities of an important force of nature, the subjects discussed at the three meetings of the Association have proved themselves sufficiently attractive to draw large audiences, and the discussions have been particularly full and exhaustive. In accord with recent tendencies much space was devoted to gynecological questions, though it may possibly surprise some surgeons not present to notice that the contra indications of electricity as contrasted with surgery received marked notice.

The JOURNAL has recognized the importance of these demonstrations of advanced electro-therapeutics from the first, having been the only publication to receive and publish the full proceedings of each meeting, and we take pleasure in announcing the early appearance of the transactions of the recent meeting in forthcoming numbers, together with other contributions from time to time, relating to this interesting field of research.

CHOLERA.

At no time since the introduction of cholera into Europe in 1829, were there so many infected points as at present. This is no doubt owing to the greater facilities of communication, while it is also true the number of cases and the mortality incident to the progress of the disease is not as great as heretofore; the necessary result of greater precaution taken to prevent the spread of the same. Cholera is abating in Russia in the districts where for the last two years it has raged with such fatal results, while at St. Petersburg, the Crimea, and a few ports on the Black Sea it is on the increase and will no doubt continue so for some time. Cases are also reported at Constantinople, and for the first time in Servia. Cairo in Egypt is also said to be infected.

In Galicia and Hungary the disease still prevails, while the epidemic is decreasing at the Danube ports in Roumania, with the exception of Brahjlon, where the fresh cases and deaths are about the same as for the last three weeks. There is not much change at Rome, Genoa, Leghorn and Naples. At Budapest there is an increase, also at Vienna. In both Budapest and Vienna, cholera is spreading among the better classes. At New Keltendorf, near Vienna, a man died of cholera, whose illness is said to have been caused by drinking water from the Danube.

A panic has been created at Bilboa on the Bay of Biscay in Spain, by the breaking out of cholera and it is rapidly spreading to the surrounding country. At Baremme, a village of 1,000 inhabitants in the Basses Alps in Southeastern France a very violent outbreak has occurred.

There has been a decided increase at Brest, Quimper and various other places in Western and Northwestern parts of France, with an increase in the number of infected localities. In Belgium, cholera is rapidly spreading in Damperemy, Marchieniess and Aupont, small towns in the province of Hainut.

A workman is reported to have cholera at the Hague. This is the first case. There is not much change in the situation at Berlin or throughout the

German Empire, with the exception of Hamburg. Here the disease has again broken out after an exemption of nearly five months. This is significant, as we may expect a like occurrence elsewhere. It is attributed to a break in the pipes that allowed water from the river Elbe to mix with the pure water. (After so long an exemption the question naturally arises how long may streams be polluted by the cholera poison?) Is it not possible that other causes may have had to do with the fresh outbreak? All the cases and deaths reported were in the suburbs of the city. One case occurred aboard the Rotterdam steamer *Amsdel* which has been lying in the harbor since September 16. It is also reported that cholera has appeared in the military barracks at Eppendorf a suburb on the Alster River. Complaint has been made that the cases were not announced earlier and that the water supply was not all filtered. In consequence of this outbreak the Hamburg-American Steamship Company have decided to dispatch their vessels hereafter from Cuxhaven. Steerage passengers for America will be kept five days under medical control at Cuxhaven before embarking. The stopping of the *Augusta Victoria* at Southampton to await the arrival of a medical inspector from Hamburg, was owing to the fact that one of the crew was suffering from choleraic disease. It is announced that if any cases should occur before reaching the port of New York she is to return to Southampton without making a landing. It is also stated that the water supply of Hamburg has been examined and found to be pure. For the last two weeks deaths by cholera at eight different points in England have been reported, the most serious outbreak being that at Hull. The indications are that the disease is slowly spreading in England, although owing to the care taken no serious outbreaks have occurred. The following cable will explain itself:

LONDON, Sept. 19.—Further questions were asked in the House of Commons to-day regarding the presence of cholera in Great Britain. In reply to these questions the Rt. Hon. Henry Fowler, president of the Local Government Board, stated that, with the exception of three ports on the east coast, all the ports of Great Britain were free from cholera. There was not the slightest reason, he added, to suppose that there was an epidemic of Asiatic cholera in any part of the United Kingdom. No cholera cases had occurred at Southampton. The medical experts attached to the Local Government Board held that there was no danger of infection from a ship that had been out fourteen days from Great Britain, and which had a clean bill of health.

Where from and how did the three ports on the east coast become infected? Was it water-borne or brought by vessels to these places, carrying immigrants from the continent for transshipment by way of Liverpool to the United States? Unless the baggage of the steerage is thoroughly disinfected, might there not be danger, even if the vessel had a clean bill of health and had been out from Great Britain fourteen days? From the foregoing it will be seen that, owing to the many points of infection and their daily increase, there is still danger of the introduction of cholera into the United States this season. While it is true that, owing to the extraordinary efforts that have been made, we have been so far spared, it is also safe to assume that the present pandemic will continue for the next season in Europe. Why not, then, suspend immigration?

In this connection it will not be out of place to call attention to the announced discovery at Berlin of a new bacillus which is claimed to have more to do with cholera than the comma bacillus of KOCH; also to a repetition of PETTENKOFER'S and EMMERICH'S experiment as follows:

VIENNA, Sept. 20.—In the Institute of Experimental Pathology here, Professors Hasterlik and Stockmayer, four students and others swallowed a quantity of comma bacilli. They suffered no bad effects beyond headache and nausea. Professor Stricker therefore draws the conclusion that the comma bacilli will not cause cholera in the case of strong, healthy subjects.

THE POISON OF RESPIRATION.

Some recent experiments by RAUER, *Untersuchungen uber die Giftigkeit der Expirationsluft*, detailed in the *Zeitschrift für Hygiene und Infectionskrankheiten*, tend to deprive the organic matter of respired air of the importance hitherto attached to it as a morbific agent. Carbonic anhydrid has always been recognized as deleterious when present in large percentages in the air which enters the lungs. It is the deadly "after damp" of the mines, and many opportunities unfortunately have been afforded of determining the postmortem appearances in death from the inhalation of this gas. We are, therefore, not surprised to find that RAUER'S mice died in an atmosphere in which the carbonic acid produced by the mice themselves amounted to 15.5 per cent. because for every per cent. so produced an equivalent amount of oxygen was used up, thus reducing the available oxygen to 5.5 per cent. Nor are we surprised that they lasted longer but eventually died in a free supply of an atmosphere containing 15.5 per cent. of introduced carbonic acid, although the available oxygen of the mixture was 17.5 per cent. We have, however, been accustomed to regard the relatively small proportion of carbonic acid in the vitiated atmospheres of overcrowded rooms as in itself comparatively harmless, and to consider that its quantitative determination by the sanitary chemists was of interest only as a measure of the associated organic elimination from the lungs, to which the headache and prostration attending the breathing of such air are usually attributed. It is true that R. ANGUS SMITH found .3 per cent. of carbonic acid to enfeeble the heart and quicken the respiration even to gasping. He claimed also that these effects could be detected with even .1 per cent., but as he himself failed to recognize such effects in the .2 per cent, of the soda

water factories, the organic matter of the respired air again assumed importance as the most deleterious of the excreta of respiration.

Now, however, comes RAUER with mice unharmed by the products of respiration, provided the carbonic acid be removed. He considers it proved by his experiments that there is no other poison produced by the breathing of animals than the carbonic acid; that indeed the existence of an organic poison in the air exhaled is impossible, for when the carbonic acid was removed there was no injurious effect, and a mixture of artificially produced carbonic acid had the same effect as that produced by an air of respiration containing the same proportion of carbonic acid. With the exception of this acid there is no gaseous poison liable to be effective in small quantities evolved from men or animals, and the conclusion is reached that men may live in absolute health in rooms with defective ventilation.

Without questioning the accuracy of these experiments we are inclined to offset them with the grand experiment that has been made during the past half century by medical men, sanitarians and philanthropists in increasing the air space and ventilation in prisons, tenements, barracks, emigrant and other ships, and living rooms generally, with the result of banishing the deadly typhus which the accumulated experience of generations recognized as due to the aggregation of human beings in confined and unventilated quarters. RAUER'S experiments are interesting, but the other is more convincing.

RIGHT TO MAINTAIN SANITARIUMS WHICH POLLUTE NEIGHBORING STREAMS.

Hospitals and homes for the sick are recognized as lawful institutions, to be fostered and encouraged, and not to be discouraged or repressed. But now comes the novel and important question as to whether one who sinks an artesian well upon his own land, and uses the water to bathe the patients in a sanitarium or hospital erected by him on the premises, is liable to injunction and damages for allowing the water to flow into a stream which is the natural water course of the basin in which the artesian well is situated, the owner being free from negligence or malice, and using all due care in avoiding injury to his neighbor. This was exhaustively considered by the Supreme Court of Indiana in the case of Barnard v. Shirley, decided June 6, 1893, reported in the advance sheets of 34 "Northeastern Reporter," 600. No principle of law is better settled, it is said, than that a man has the right to the lawful use and enjoyment of his own property, and that if, in the enjoyment of such right, without negligence or malice, an inconvenience or loss occurs to his neighbor, it is a wrong for which there is no liability. If, in the excavation of his land, he should uncover a spring of water, salt or fresh, acidulated or sweet, he will certainly not be obliged to cover it again, or to conduct it out of its course, lest the stream, in its natural flow, may reach his neighbor's land. But on the main point involved here, the nearest precedent is found in a mining case, where it was held that in the operation of mining in the ordinary and usual manner, a person may, upon his own lands, lead the water which percolates into his mine into the streams which form the natural drainage of the basin in which the mineral is situate, although the quantity as well as the quality of the water in the stream may thereby be affected. And this doctrine has been adopted by the court in this case, where the contention was that water caused to rise from the earth was polluted in bathing the bodies of diseased persons, having all manner of diseases, including syphilis, which after it had thus become befouled, was caused to be conveyed in a tile ditch underground, to the adjoining lands over which it was made to flow into a natural stream of water running thereon, causing such natural stream of water to become befouled and polluted, thereby exposing the same to the stock pasturing and feeding upon said land where stock was accustomed to run, feed, and pasture, such as milch cows, horses and hogs, which drank the water in its befouled and polluted condition. The court said that the natural right to have the water of a stream descend in its pure state must yield to the equal right of those above. Their use of the stream for the manifold purposes for which they might lawfully use it would tend to render it more or less impure. The water might thus be rendered unfit for many uses for which it had before been suitable; but, so far as that condition may result from reasonable use of the stream in accordance with the common right, the lower riparian proprietor has no remedy. Sewage and waste material may be cast into streams if material injury is not thereby caused. Inconveniences resulting from many causes must be endured by individuals for the general good; otherwise we should have to forego a multitude of the blessings of modern civilization.

Still, when a business is dangerous, unhealthful, or otherwise greatly injurious to a community or to an individual, and it is possible to avoid the injury by a more careful management, or even, if necessary, by a removal to a more secluded or less objectionable place, then the owners of the noxious business will be mulcted in damages, and, if necessary, restrained by the courts. And a man may not carry on a business which poisons the air and renders it unhealthy in a thickly populated neighborhood, and especially in the center of a large city. So establishments which involve danger, as powder mills and certain kinds of manufactories, must seek a secluded place where as few persons may be incon-

venienced as possible. Then, is it lawful to build a sanitarium for the cure of the sick or to bathe in the waters those afflicted with disease? It is certainly lawful to do so, continues the court, provided the sanitarium is properly conducted and well managed, so as to do no injury to any person which reasonably and with due care can be avoided. This being true, it follows that those who, with due care, use the water of an artesian well to bathe patients at a sanitarium, the well and sanitarium being on their own premises, are not liable to an adjoining owner for allowing the water, so polluted, to flow into a stream which is the natural water course of that section. Moreover, if the person complaining stood by while money was being expended in erecting such sanitarium, and acquiesced for more than a year in the flow of water, he could not, on account of the law of estoppel, enjoin the continued operation of the sanitarium.

MISSISSIPPI VALLEY MEDICAL ASSOCIATION.—Special car for physicians will leave the new Illinois Central R. R. station, 12th Street and Michigan Avenue on Tuesday evening at 11:30, by the "Big 4" route, reaching Indianapolis at 7 A. M. Fare for the round trip, one and one-third excursion rate. The sleeping-car will be at the depot at 9:30 P.M. for such as wish to retire earlier than 11:30. Engage sleeper and buy tickets at the Big Four office, No. 234 Clark Street.

SELECTIONS.

Report of the British Local Government Board, 1891-92.—The supplement to the twenty-first annual report of the Local Government Board, 1891–92, containing the report of the medical officer, has just been received. Dr. R. Thorne Thorne, who now occupies this important position under the British Government, begins his report with a testimonial to the distinguished services of his predecessor, Sir George Buchanan, who resigned March, 1892. "For over thirty years," he says, "Sir George Buchanan has, either as medical inspector or as the Board's medical officer, contributed to the annual reports of the medical department, and many of his contributions have become classic in the literature of public health both in this and in other countries. But those alone who have had the opportunity and pleasure of working under his direction can appreciate to the full the important influence for good which his labors have had; and they alone can realize how much the medical department owes to the example which he set, as an earnest worker and director who never ceased to claim that all true sanitary progress must be based on accurate and scientific research into the etiology of disease." Sir George Buchanan was a worthy successor to Sir John Simon, whose name is a household word in the annals of public health.

An interesting account is given by Dr. Bruce Lowe of an anomalous illness that prevailed in Northamptonshire characterized by pneumonia, sometimes by meningeal symptoms, and frequently associated with tonsilitis or sore throat. Certain of these cases had much in common with sporadic cases of cerebro-spinal fever that prevailed in some of the Eastern counties during the previous year.

An outbreak of scarlet fever at Enfield and Edmonton, investigated by Dr. S. Monckton Copeman, was attributed to a milk supply which was derived from a farm at some distance from Essex, where attacks of the same disease occurred among consumers of milk from the same farm. No infection of the milk from a human source could be made out, but the cows were found to be suffering from udder eruption. Inoculation of calves with matter from this eruption gave negative results in the hands of Dr. Klein. In cultures on gelatin a non-liquefying microbe was the predominant organism, similiar to the streptococcus isolated by him from sores on Hendon cows in 1885, but the present organism inoculated into mice proved only doubtfully pathogenic.

Complaints of nuisance and of injury to health from the transportation of town manure to agricultural districts led to an investigation and an exhaustive report on the subject. The complaints had reference chiefly to manure from London, although that from other large towns as Liverpool, Newcastle, Nottingham, Portsmouth and Plymouth, had also been complained of in the districts to which it is distributed. London manure is as a rule entirely free from human excreta, but it is otherwise a compound of nearly every form of animal and of some forms of vegetable refuse; such materials as dead and putrefying animals, fish guts, paunches, etc., being mingled with stable manure, cabbage stalks, rotten vegetables, etc. And the diseases which were most commonly regarded as being referable to the offensive emanations were diphtheria and allied sore throat. Two principal objects were held in view during the inquiry. To learn how far allegations as to injury to health and even as to the production of definite diseases were supported by actual experience, and to ascertain how far nuisances, owing to the unloading and temporary deposit of the manure at railway sidings and elsewhere, and lack of care in carting could be dealt with by law or regulations. The outcome of the inquiry under the first heading showed that in so far as bodily discomfort and functional disturbance, at times involving general impairment of health, are concerned, exposure more or less recurring to the offensive effluvia concerned does affect health, and that whilst certain affections, such as sore throat, which it has not always been possible to differentiate from diphtheria, can with some degree of certainty be held to have relationship with exposure to the manure effluvia, it has not been possible so to eliminate other sources of infection and of disease as to identify the effluvia with the production of any specific affection. To a great extent the nuisances arising from the manure traffic are already under the control of local authorities through the provisions of the Public Health Acts or through by-laws which may be made thereunder; but in agricultural districts and small market towns there is often an indisposition on the part of local authorities to exercise the powers which they possess in this connection.

The supplement contains a further report on the pathology and etiology of diphtheria by Dr. Klein. Taking the presence of the Klebs-Löffler bacillus in definite relation with the mucous membrane as the *vera causa* of diphtheria, he tested various throat ailments with the following results: "Scarlatinal diphtheritis" occurring in the early days of scarlatina is not, judged from the bacteriological standpoint, diphtheria; but similar manifestations whether of diphtheritic or croupy type, occurring in the later stages of and during convalescence from scarlet fever, are almost invariably true diphtheria. He found also that membranous croup of the larynx or trachea, although altogether dissociated clinically from diphtheria, must be regarded as essentially that disease.

Dr. Klein's experiments on the inhibitory action of the metabolic products of one microörganism on the life pro-

cesses of pathogenic organisms are full of interest. The expectation that the chemical products of bacillus pyocyaneus would be found to have distinct inhibitory action on the tuberculous process recorded by the medical officer in his report for 1890, has been fully borne out so far as regards guinea pigs by these experiments. Guinea pigs were inoculated, some with material of bovine, some with human tubercle, and as soon as the disease was established certain of the animals were repeatedly injected during successive days, now with dilute, now with undilute sterilized cultures of bacillus pyocyaneus, while others were kept for control. The latter invariably died in the usual time, while in the former the tuberculous process was delayed or even arrested. So uniformly in this way was inhibition of the tuberculous process obtained, especially with undiluted cultures of the bacillus, that further tests were made on cows and calves; but attempts to set up tuberculosis by subcutaneous inoculation of the matter of bovine tuberculosis practically failed in the cows and calves used in the experiments, and so far he has been unable to make further trial of the inhibitory action of the bacillus pyocyaneus.

Dr. Sidney Martin obtained during the year from the blood and spleen of persons dead of diphtheria, from the diphtheritic membrane in cases not fatal, and from artificial cultures of the bacillus diphtheriae albumoses an organic acid which, when injected into rodents produced definite physiological results of a nature parallel with those observed in the human subject attacked with diphtheria,—particularly did he observe those nerve lesions that have obtained the name of diphtheria paralyses. These lesions are due to a degeneration of the peripheral nerves, which is an early and direct result of the diffusion in the experimental animal of the chemical products of diphtheria and chiefly of the albumoses.

Some interesting observations by Dr. Andrews on pus as a culture medium for certain pathogenic and saprophytic microörganisms are also reported. For the most part the microbes failed to multiply. Among the pathogenic species anthrax and diphtheria were at opposite points; the bacilli and spores of the former died out in the pus, but the bacilli of the latter not only retained their vitality but even multiplied.

The report is illustrated by some fine reproductions from photographs showing the degeneration of the peripheral nerves caused by the intravenous injection of albumoses.

Epidemic Influenza.—In 1891, Sir George Buchanan, the Medical Officer of the Local British Government Board, presented to the Board a report on influenza by Dr. H. F. Parsons. Recently his successor, Dr. R. Thorne, has submitted a further report by Drs. Parsons and Klein on the recurrence of the disease in epidemic form in the spring of 1891 and winter of 1891–92. The onset of these recurrences was less sudden than in the case of the epidemic of 1889–90; and this is regarded as evidence that a severe epidemic may serve to give a certain immunity against another in the same locality. There were, however, some notable exceptions to this, and no condition of site, soil, climate, sanitary circumstances or occupation has yet been instanced as giving a satisfactory explanation of the different incidences.

In 1890 the average death rate from influenza per thousand living was .157; in the later epidemics or recurrences it varied from .52 to .58 in the urban, to .73 in the rural districts, the later having a larger proportion of old people in their population. The mortality was not highest in localities having a high general death rate, nor was it highest in those having a high rate for diseases of the respiratory organs; but there was a distinct parallelism between deaths from influenza and those from diseases of the heart and other organs of the circulation.

Epidemic influenza does not check other epidemics as has sometimes been stated by observers in former times; for during the prevalence of the recent epidemics there were at various places high death rates sustained for several weeks from whooping cough, measles and scarlet fever.

Multiple cases in a household frequently occurred in succession, and the first case could in numerous instances be traced to exposure to infection from a previous case or a visit to an infected place. In fact, the evidence shows influenza to be propagated from person to person. The disease followed the lines of human intercourse in so many instances that atmospheric causes must be given up in the theory of its propagation. Moreover, the discovery of a bacillus peculiar to the sputa of influenza, not only suggests a personal transmission, but the necessity for dealing with these discharges as is held necessary in the case of discharges from the throat, mouth and nostrils of scarlet fever and diphtheria. Klein verified the observations of Pfeiffer and Kitasato on the constant and copious occurrence in the bronchial secretions, during the acute stage of cases of influenza, of a minute, non-mobile bacillus. The report is illustrated with upwards of forty reproductions of photographic representations of the bacilli. Inoculation into rabbits gave negative results, and the same may be said of similar experiments on monkeys. Horses were not used, but as no disease akin to influenza was observed among the inferior animals during the progress of the epidemics, Klein inclines to the opinion that the disease among horses to which the name of influenza is commonly given can not be identified with influenza in the human subject.

Dr. Caldwell Smith of Anderson College, Glasgow, is cited as follows: "It is to the life history of Pfeiffer's bacillus that we must direct our attention, if we wish to understand the seemingly strange vagaries of the disease. I believe strongly that it is very infectious, and that it is so even in the prefebrile or incubation period. An individual is infected by breathing at once the expired air from a person suffering from the disease, and I believe this to be the only method of infection. In this respect it resembles typhus fever. I can not see my way to believe in mediate infection, as the germ can not, according to Kitasato, grow at a temperature lower than 28° C. From my own clinical observation I have rarely met with a case which could not have arisen from a previously existing one, and even in those few rare cases, if strict inquiries had been made, I believe that the source of infection would have been discovered. Again, the bacillus is, I think, easily destroyed by free ventilation. From my own observation I would say that drying does not preserve, but destroys it, and that, like the cholera spirillum, its life history is, though difficult to explain, a very short one. In a suitable medium, that is, in the human body, it must multiply enormously, and in overcrowded apartments it plays havoc with the inmates."

Granted that influenza is propagated by infection from person to person, what are the circumstances which conduce to its epidemic spread at one time, often simultaneously in widely distant places, and not at another? To this question Dr. Parsons answers that it probably depends on the degree of concentration of the specific poison, likening its spread to a fire lighted in green wood, which if small will die out, but if large may set fire to the wood which will continue to burn. "Or we may compare the resisting forces of the human body (be they phagocytes or something else) to a strong man who can vanquish a number of foes one at a time, but would be overpowered by them if they attacked him all at once. A person of ordinary powers of resistance may escape serious harm from a small dose of the influenza poison (whether microbe or its product) but will succumb to a large dose or to a prolonged exposure. The feelings of malaise so commonly felt during an influenza epidemic by persons not actually themselves the subjects of the disease are, we may suppose, the effects of minor doses of the poison."

The notable clinical points observed during the epidemics were the debility left by the attack, the liability to pneumonia to which most of the mortality was due, the gastro-intestinal catarrh, cerebro-spinal symptoms and the simulation of scarlet fever by an erythematous rash, desquamation and strawberry tongue. Among the sequelæ were noted: great prostration, with confusion and an approach to mental and physical paralysis: neuralgia, persistent dyspepsia, abdominal pains, inflamed throat, rheumatism, phlebitis, meningitis, deafness, peritonitis, pericarditis, excessive prolongation of subnormal temperature, as sometimes observed

after scarlet fever; diarrhea and lastly desquamation of tongue and fauces as in scarlet fever.

The clinical diagnostic marks between ordinary catarrh and mild cases of influenza are not distinctly outlined, the most notable being the greater tendency in influenza to pains in the back and in the course of the spinal nerves, the dental and frontal nerves often being affected. Influenza also is followed by greater and more persisting prostration. But the necessity for clinical diagaostic signs will hereafter be obviated by a demonstration of the specific bacillus.

SOCIETY NEWS.

American Dermatological Association.

Abstract of the Proceedings of the Seventeenth Annual Meeting, held in Milwaukee, Wisconsin, September 5 and 6, 1893.

SEPTEMBER 5—FIRST DAY—MORNING SESSION.

The Association met in the club-room of the Pfister House, and was called to order by the President, Dr. GEORGE HENRY FOX of New York, at 9:30 A. M.

The first paper read was by Dr. R. B. MORISON of Baltimore, Md., entitled

COSMETICS.

The author said that cosmetics, in a general way, may be divided into two classes, namely, those which are irritating, and those which are soothing. For instance, if we wish to remove freckles or warts, a stronger application must be made than if we simply prescribe for a redness following an acne, or an eczema. It is invariably his custom to teach the patient, either through himself or his assistant, how to apply local remedies. Salves, plasters, lotions, and caustics are so often misapplied that experience had taught him to have an application from which one hoped to get the most good, made by skilled hands to begin with. He finds that nothing suits his patients better for the removal of freckles than the following solution:

℞. Corrosive sublimate, grs. vii.		48
Distilled water, ℥vi.		36
Spirits camphor, ℥ss.	16	
Rose water, ℥v.	20	

Three or four thicknesses of linen cut to cover the seat of freckles, are moistened with the solution and placed upon the face at night until they dry, when they are taken off. Whatever remains on the skin is left there till morning and then washed off. After a few nights' application the face becomes red, and the epidermis begins to peel off in fine scales. Then an ointment is used night and morning, the application being made by gently rubbing it over the face, with a clean finger for five minutes at a time.

In the removal of superfluous hairs, the author has given up electrolysis. The results which he had had himself and those which he had seen of others have not been sufficiently good to warrant its continuance. He finds that the proper application of a good depilatory answers the purpose much better. There are many women who wish to get rid of the white lanugo down on their faces, upon whom it seems that electricity can not be used for fear of stimulating the growth of the surrounding hair, and the appearance of permanent scars. If a preparation of yellow sulphate of arsenic and quicklime, of equal parts, made into a paste with hot water, be allowed to dry on the hairy skin it removes the hair for ten to twenty days, and sometimes permanently. On the other hand, nothing seems to take the place of electrolysis where there are a few strong hairs growing from moles, in the removal of moles themselves, in angioma, or in permanent small red spots.

For the removal of warts the author prescribes the following:

℞. Hydrarg bichlor., grs. v.		30
Ac. salicyl., ℥i.	4	
Collodion, ℥i.	32	

He sometimes increases the bichloride of mercury to 30 grains in the same amount of collodion, if the milder application does not answer. It is applied every day once, the upper crust of the previous application being removed before a fresh one is made. Four such applications generally soften the wart to such a degree that gentle traction removes it painlessly, the further dressing being any simple ointment.

The author had obtained excellent results in cases of acne by the use of the galvanic current.

Dr. GEORGE T. JACKSON of New York, read a paper entitled

A CASE OF RHINOSCLEROMA,

in which he said that in October, 1892, he had the pleasure of presenting to his class at the Woman's Medical College of New York Infirmary, a case of rhinoscleroma. There have been only three cases of this disease reported by the members of the American Dermatological Association since its foundation in 1877. The patient, a woman, 54 years of age, was born in Hungary. The disease began sixteen years ago as a slight thickening of the upper lip to the left of, and just under the septum nasi. Since then it has grown slowly and without pain. During the past four years it has increased in size more rapidly than during the preceding twelve years. At present it appears as a hard, well-defined, elevated, old ivory-colored mass, located upon the upper lip, beginning at a point a little to the right of the middle line and occupying near the whole of the left side of the lip. It runs up upon the left side of the septum nasi to a slight extent. It is slightly lobulated, so that it has an uneven surface, and shows a number of dilated blood vessels running over it, and a number of white points apparently representing plugged up and dilated follicles. There is no history of syphilis, nor does it look like a syphilitic growth. There is no sign of ulceration nor tendency to break down. She has been previously under the care of Dr. Charles W. Allen of New York city, who had cut out a small piece of the growth, and this had been examined microscopically by Dr. Lustgarten for the bacilli, discovered by Frisch, with negative results on account of the meagerness of the material. Nevertheless, there was no doubt as to the diagnosis.

The disease is a very rare one, and most of the cases have been reported from Austria and Southern Russia.

No satisfactory treatment of the disease has been found. The best results so far reported have been attained by the use of salicylic acid injected into the tumor daily, a 1 per cent. solution of the acid or a 2 per cent. solution of salicylate of soda being used; while ten grains of the acid were administered by the mouth three times daily.

A CASE OF CIRCUMSCRIBED SCLERODERMA (MORPHOEA.)

This was the title of a paper read by Dr. W. T. CORLETT of Cleveland, Ohio. Mary M, aged 10 years, an intelligent looking girl, well nourished, although slightly pale, presented herself, with variously sized and colored lesions on left upper extremity. These were of two years duration. The lesions were located on the extensor surfaces, the most typical lesion being situated in the middle third of the forearm. This was of oblong shape, four inches in length, and two inches in width. It was slightly contracted, lessening somewhat the circumference of the forearm, and was somewhat depressed, resembling cicatricial tissue. The lesion presented a yellowish-brown central area with a slightly uneven surface, slightly indurated, and non-adherent. No anæsthesia. Hairs were absent. Outside the central zone was a bluish white area surrounded by a lilac pink border merging into normal skin. Veins about the lesion were very prominent. A second spot had appeared one year after the first on the back of the hand, the characteristics of which were similar to the preceding. During the four months prior to her first visit to Dr. Corlett, seven other spots appeared on the arm and one on the shoulder. These were smaller than the original. Sharp pains were now complained of extending from the shoulder to the hand. These were aggravated by writing, but lasted only a few days. Some itching around the margin of the lesions and occasionally frontal headache were complained of. There was tenderness over the upper dorsal and lower cervical vertebræ; no motor or sensory impairment anywhere, nor were there any other evidences of cord disease. There was no history which might possibly explain the lesions excepting a fall upon the back at the age of five years. No history of nervous or hereditary disease of any kind in the family. The doctor considered the case as a perfect type of morphœa originally, but at the present time the case presents a picture of the atrophic stage of scleroderma.

The points of interest are:

1. The changes of clinical form through which the disease has passed.

2. The predominance of the neurotic element which is so often well marked in morphœa, and which points to the spinal cord as the most probable seat of the disturbance.

3. The confusion of nomenclature of morphœa and its relation to scleroderma is of some interest. Modern treatises on dermatology by American authors are in the main

inclined to consider morphœa and scleroderma as distinct affections, while European authorities are rather inclined to the opposite view.

The author has not attempted to advance any original suggestions regarding treatment, contenting himself with the clinical presentation of the case.

Dr. W. A. HARDAWAY of St. Louis, Mo., read a paper entitled

A CASE OF TUBERCULOSIS OF THE SKIN SIMULATING LUPUS ERYTHEMATOSUS.

The patient was a pharmacist, 28 years of age, previous health good, family history good and no history of tubercle. Tall and spare, and of sallow complexion, yet he is a man of great endurance. In May, 1892, he noticed on his left malar region a small yellowish elevation the size of a pinhead. This was supposed to be a flesh worm and was squeezed, blood only being thereby obtained. The lesion gradually enlarged peripherally, becoming hard and red. No subjective phenomena. He came under Dr. Hardaway's care in June, 1892, the lesion being now as large as a dime, presenting an atrophic whitish center surrounded by a slightly raised infiltrated border of a dull red color. The lesion was anæsthetic, a characteristic which has been noticed in tubercular syphilides. The anæsthesia was temporary. In a short time the patient passed from under observation and was gone for a month, during which time he was thoroughly treated for syphilis by another physician. The treatment simply aggravated the general and local conditions. September 3, 1892, the original lesion was the size of a half dollar, not raised from the surface and moderately infiltrated. The center is still atrophic, and the same narrow dull red line presents at the borders. In a few weeks several small acniform pustules appeared on the right temple, side of the nose, and inferior angle of the right eye. Others presented on the end of the nose, right ala, and left cheek. These lesions were not painful or itchy. Each lesion was surrounded by a red areola which subsequently extended and became infiltrated, crusts forming over the centers of the lesions. The crusts were fatty or sebaceous in character, and with a dull red surface beneath were suggestive of lupus erythematosus. As the borders of the lesions extended the centers cicatrized, presenting the same dirty, yellow appearance of the original patch. December 9, thiosinamin was given hypodermically at 12, and the patient stated that about 7 P.M. the patches became hot and red, remaining so for an hour or two. Other injections of the drug were subsequently given but without effect. December 22, the lesion in the right eye had become as large as a quarter of a dollar. Electrolysis had been tried on the spot on the left temple, but it was still spreading. A new spot was now found on the chest, beginning like an acne papule, which became postulated and finally scaly. This went through the same metamorphosis as the previous lesions, the elevated red border extending until the lesion was as large as a pea, when it was thoroughly destroyed by electrolysis. Early in January a small piece of skin was excised from the lesion on the right temple and examined microscopically. Electrolysis was tried upon the other lesions with an apparent cure, followed by a relapse after a few months, manifesting itself first by the formation of a scale in the center of the scar. Electrolysis was persisted in as fast as the spots appeared and with apparent success. In March a small patch similar to the others appeared upon the scalp; this is now the size of a dime. The tendency to peripheral extension throughout has been a marked feature in this case. The whole nose finally became involved and became a continuous lesion of partly red and partly cicatrized integument, presenting a striking likeness to some forms of lupus erythematosus. Dr. Hardaway thought that this resemblance would have been more striking if the patches on the side of the face had been allowed to coalesce instead of being destroyed by electrolysis. At no time could nodules of lupus vulgaris be demonstrated, nor were the sebaceous plugs of lupus erythematosus seen at any time. The patient's general health has continued so poor that at one time general tuberculosis was considered imminent. A trip to Colorado brought about great improvement. At last accounts the disease was apparently quiescent, the patient's general health good, and no lesions of the lungs and larynx have been detected. Dr. C. Heitzmann reports, after microscopical examination of the excised piece of skin, that a moderate number of tubercle bacilli were found. A large number of inflammatory corpuscles were also detected, displacing the fibrous connective tissue. Nests of inflammatory corpuscles were seen in the arrangement characteristic of tuberculosis. The diagnosis was local tuberculosis of the skin, which was entirely in accord with the clinical diagnosis.

Dr. H. R. CROCKER of London, Eng., read a paper on

LUPUS ERYTHEMATOSUS AS AN IMITATOR OF VARIOUS FORMS OF DERMATITIS.

The author said that lupus erythematosus as an imitator of various forms of simple dermatitis was a formidable rival of syphilis itself. It was to this aspect of the disease that he desired to direct attention by relating some cases and showing drawings which illustrated the points he wished to place before the Association.

The first drawing was an instance of a lupus imitating erythema tuberculatum. The patient was 27 years of age. The lesions commenced on the right cheek. There was only one spot for the first two years, then others formed on the side of the nose, and they then became scattered irregularly over the face, but with the exception of a hempseed sized nodule on the left ear, there were none anywhere else. The lobes of both ears were atrophied looking, but the patient said there had never been any lesions on them. All the lesions were exactly like an erythema tuberculatum, varying from a hempseed to half an inch in diameter; quite smooth, except one on the side of the nose, which was scaly. They were of a uniform purplish-red except one, which was whiter in the center.

Case 2 showed an advanced condition of the disease, which began in a similar form to Case 1.

Case 3 was one of lupus erythematosus, like erythema papulatum. The patient, aged 42, was a cab driver. Two years previously he had some rash on the cheeks which lasted only a month, and it was not until a year ago that the present eruption began on the sides of the cheek, and has gradually extended until it reached its present condition. The eruption when seen occupied the whole face below the eyebrows, the orbits themselves and the lower lip escaping, but the chin, except in the center, was affected. On the left side it extended above the brow, but below the orbits, which was remarkably symmetrical. The most recent lesions were on the lower part of the side of the face and below the jaw. In these positions they were the form of erythematosus, slightly raised discs from a half to a quarter of an inch in diameter; the most recent were quite smooth and slightly convex; the larger ones were not prominent in the center and but slightly scaly.

Case 4 was like diffuse erythema, the patient being a lady 43 years of age. The disease had commenced three years previously as a small red spot on the side of the nose and had spread continuously; the whole nose was intensely reddened and slightly scaly, the skin thickened and infiltrated, but the orifices of the sebaceous glands were not patent or plugged.

Another disease which lupus erythematosus imitates is psoriasis, and the author reported a case in point. A rarer imitation is that of lichen planus, of which the author had seen only two cases.

Dr. Crocker also reported a case of lupus erythematosus nodulatum. He had met with three or four other cases of this, but not with so many distinct foci of disease. In two cases there was only a single nodule in each. He also remembers a case in which there were even more foci of disease in a patient of the late Dr. Tilbury Fox. Cavafy also showed a man at the Dermatological Society of London, in 1892, but Dr. Crocker was not aware of any other cases having been recorded.

(To be continued.)

New York State Medical Association.—Program of the proceedings of the tenth annual meeting, to be held at the Mott Memorial Hall, on Madison Avenue. Introductory, Monday, October 9, 1893.

Evening Session, 8 o'clock.—1. Address of Welcome, by the chairman of the Committee of Arrangements, J. G. Truax, M.D., of New York Co. 2. Address by the president. 3. Address: The medical work of the Association during its first decade, by John Shrady, M.D., of New York Co. Collation.

First Day, Tuesday, October 10.—Morning session, 9 o'clock. Order of business: *a.* Calling the meeting to order. *b.* Report of the Committee of Arrangements. *c.* Address of the president. Read at evening session October 9. *d.* Annual report of the council. *e.* Report of special committees. *f.* Unfinished business. *g.* New business. *A.* Annual reports of the presidents of branch associations, in their numerical

order, to be read by title. *B.* Annual report of the president of the New York County Medical Association, to be read by title.

4. Address: The surgical work of the Association during its first decade, by Stephen Smith, M.D., of New York Co.

5. "Report of eight cases of placenta prævia," by Zera J. Lusk, M.D., of Wyoming Co.

6. "Penetrating wound of anterior fossa through orbital plate of frontal bone. Recovery," by Zera J. Lusk, M.D., of Wyoming Co.

7. "The treatment of epithelioma and the cancroid ulcers by topical application," by Nelson J. North, M.D., of Kings Co.

8. "Prevention of disease." by James G. Porteous, of Dutchess Co.

h. Announcement by the presiding officer that the Fellows from the different districts shall appoint two members of the nominating committee from each district. *i.* Appointment by the president of a member at large of the nominating committee. *j.* Adjournment of the session. During this recess of half an hour, the Fellows from the different districts shall meet to appoint the two members of the nominating committee from each district.

First Day, Tuesday, October 10.—Afternoon session, 1 o'clock. Discussion on lesions of the pleura. 9. The discussion will be opened by John Shrady, M.D., of New York Co., propounding the following questions:

Question 1. What are the factors of pleurisy? Its forms and contributive conditions? What are the pathological changes in a case of progressive pleurisy ending in recovery? 10, by Frank W. Ross, M.D., of Chemung Co. 11, by William McCollom, M.D., of Kings Co,

Question 2. What are the points of differential diagnosis in pleurisy and other affections of the chest? 12, by Edward F. Brush, M.D., of Westchester Co. 13, by J. Blake White, M.D., of New York Co. 14, by John G. Truax, M.D., of New York Co.

Question 3. What is the treatment of empyema, with relative value of aspiration, rib resection and free opening with tube drainage? 15, by M. K. Hogan, M.D., of New York Co. 16, by Charles A. Leale, M.D., of New York Co.

17. "The surgical treatment of pulmonary cavities," by N. P. Dandridge, M.D., of Cincinnati, O.

First Day, Tuesday, October 10.—Night session, 7:30 o'clock.

18. "Remarks on fermentative dyspepsia," by Austin Flint, M.D., of New York Co.

19. "Open treatment of tuberculous disease of the joints," by T. M. L. Chrystie, M.D., of New York Co.

20. "Bloodless amputation at the hip joint. Report of cases operated on by the author's method," by John A. Wyeth, M.D., of New York Co.

21. "Report of a case of osteotomy of both femora for the relief of deformity following ankylosis of the hip joints," by Reginald H. Sayre, M.D., of New York Co.

Second Day, Wednesday, October 11.—Morning session, 9 o'clock. Order of business: *a.* Calling the meeting to order. *b.* Communications from the council. *c.* Reports of special committees. *d.* Unfinished business. *e.* New business.

22. Address: The obstetrical and gynecological work of the Association during its first decade, by George Tucker Harrison, M.D., of New York Co.

23. "Rare forms of gout and rheumatism," by Sir James A. Grant, of Ottawa, Canada.

24. "Treatment often indicated after trachelorrhaphy," by William H. Robb, M.D., of Montgomery Co.

25. "R," by Henry D. Didama, of Onondaga Co.

26. "Ten years' experience in the treatment of cataract," by Alvin A. Hubbell, M.D., of Erie Co.

27. "The treatment of enteric fever." by Gustavus Eliot, M.D., of New Haven, Conn.

28. "Voluntary commitment of the insane to asylums," by W. D. Granger, M.D., of Westchester Co.

f. Adjournment of the session.

Second Day, Wednesday, October 11.—Afternoon session, 1 o'clock.

29. "Surgical and pathological memoranda," by Donald McLean, M.D., of Detroit, Mich.

Discussion on the treatment of appendicitis. 30. The discussion will be opened by Frederic S. Dennis, M.D., of New York Co., propounding the following questions:

Question 1. What proportion of cases of appendicitis end in resolution?

Question 2. What class of cases require immediate operation?

Question 3. What class of cases do not require immediate operation? These questions will be answered by: 31. R. N. Cooley, M.D., of Oswego Co. 32. Donald McLean, M.D., of Detroit, Mich. 33. W. S. Tremaine, M.D., of Erie Co. 34. Joseph D. Bryant, M.D., of New York Co. 35. John W. S. Gouley, M.D., of New York Co.

Second Day, Wednesday, October 11.—Evening. Banquet. Fellows of the Association have made arrangements to celebrate this first decimal assembly by a banquet, further notice of which will be given by the Secretary.

Third Day, Thursday, October 12.—Morning session, 6 o'clock. Order of business: *a.* Calling the meeting to order. *b.* Communications from the council. *c.* Report of the nominating committee, and action upon such report by the Association. *d.* Report of special committees. *e.* Unfinished business. *f.* New business.

36. "The male catheter, with some observations upon the proper mode of introduction into the bladder," by Douglas Ayres, M.D., of Montgomery Co.

37. "Researches on the efficacy of vaccinia after typhoid fever," by William Finder, Jr., M.D., of Rensselaer Co.

38. "Reflections on the need of close observation of disease and upon the value of hygienic therapeutics," by H. Ernst Schmid, M.D., of Westchester Co.

39. Unique case of traumatic tetanus, with generalization recovery," by John G. Orton, M.D., of Broome Co.

40. "A case of puerperal blindness," by Darwin Colvin, M.D., of Wayne Co.

41. "A plea for the non-operative method of treating dysmenorrhea, pelvic inflammation and pelvic abscess," by T. J. McGillicuddy, M.D., of New York Co.

42. "An additional note on nephrotomy and nephrectomy," by E. D. Ferguson, M.D., of Rensselaer Co.

43. "Fifty operations for laceration of the cervix uteri," by J. B. Harvie, M.D., of Rensselaer Co.

44. "Brief comments on the materia medica, pharmacy and therapeutics of the year ending October 1, 1893," by E. H. Squibb, M.D., of Kings Co.

g. Adjournment of session.

Third Day, Thursday, October 12.—Afternoon. Excursion to the island hospitals by invitation of the commissioners of charities and correction. Luncheon will be served on board the steamer, which will start at 1 o'clock from the pier at the foot of 26th Street, East River.

Papers may be read "——— either entire, by abstract, or by title only, as may be determined by the council. ———

"The reading of a paper shall not occupy more than thirty minutes, except by permission of the Association.

"No person shall speak more than once, and then not longer than ten minutes, in the discussion of any paper, except by permission of the Association.

"No voluntary communication shall exceed fifteen minutes in length, except by permission of the Association. ———"

See By-Laws, Article X, Sections 7, 8, 9 and 11.

COMMITTEE OF ARRANGEMENTS.—S. B. Wylie McLeod, President; E. D. Ferguson, Secretary, ex-officio members of the committee; John G. Truax, Chairman; Chas. E. Denison, Secretary; F. A. Baldwin, C. G. Campbell, Alfred L. Carroll, Ellery Denison, A. Palmer Dudley, John E. Erdmann, John W. S. Gouley, George T. Harrison, Charles A. Leale, Ogden C. Ludlow, James C. Mackenzie, William McCollom, Johnston McLeod, Valentine Mott, A. D. Ruggles, John Shrady, Stephen Smith, E. R. Squibb.

COUNCIL OF THE NEW YORK STATE MEDICAL ASSOCIATION, 1893.—*First or Northern District.*—R. N. Cooley, Vice-President, Hannibal Centre, Oswego Co.; E. T. Rulison (1893), Amsterdam, Montgomery Co.; A. P. Dodge (1894), Oneida Castle, Oneida Co. *Counties:* Franklin, Fulton, Hamilton, Herkimer, Jefferson, Lewis, Montgomery, Oneida, Oswego, St. Lawrence.

Second or Eastern District—J. C. Hannan, Vice-President, Hoosick Falls, Rensselaer Co.; Thomas Wilson (1893), Claverack, Columbia Co.; J. B. Harvie (1894), Troy, Rensselaer Co.; E. D. Ferguson, Secretary and Treasurer, Troy, Rensselaer Co. *Counties:* Albany, Clinton, Columbia, Essex, Green, Rensselaer, Saratoga, Schenectady, Schoharie, Warren, Washington.

Third or Central District.—N. Jacobson, Vice-President, Syracuse, Onondaga Co.; Homer O. Jewett (1893), Cortland, Cortland Co.; M. Cavana (1894), Oneida, Madison Co. *Counties:* Broome, Cayuga, Chemung, Chenango, Cortland, Delaware, Madison, Onondaga, Otsego, Schuyler, Seneca, Tioga, Tompkins.

Fourth or Western District.—Z. J. Lusk, Vice-President, Warsaw, Wyoming Co.; Thomas D. Strong (1893), Westfield, Chautauqua Co.; F. H. Moyer (1894), Moscow, Livingston Co. *Counties:* Alleghany, Cattaraugus, Chautauqua, Erie, Genesee, Livingston, Monroe, Niagara, Ontario, Orleans, Steuben, Wayne, Wyoming, Yates.

Fifth or Southern District.—S. B. W. McLeod, President, 247 West 23d St., New York, New York Co.; John G. Truax (1893), 17 East 127th St., New York, New York Co.; Alfred L. Carroll (1894), 30 West 59th St., New York, New York Co.; John W. S. Gouley, Director of the Library, 324 Madison Avenue, New York, New York Co.; John Shrady, Member-at-Large, 149 West 126th St., New York, New York Co. *Counties:* Dutchess, Kings, New York, Orange, Putnam, Queens, Richmond, Rockland, Suffolk, Sullivan, Ulster, Westchester.

Communications may be addressed to Dr. E. D. Ferguson, Secretary, Troy, N.Y.

Blank applications for membership in the ASSOCIATION, at the JOURNAL office.

Tri-State Medical Society.—Regular session will convene at Peoria, Ill., Tuesday and Wednesday, October 3 and 4, 1893. All members of the regular medical profession are cordially invited to be present and participate with us. W. H. Martin, President; J. M. Ball, Secretary.

PROGRAM.—Morning sessions, 9 A.M. Afternoon sessions, 2 P.M. Lecture on Tuesday evening, October 3, at 8 o'clock, by Emery Lanphear, M.D., Ph.D., of Kansas City, Mo. Subject, "The Wonders of the Brain."

The sessions of the Society will be held in the spacious hall of the Y. M. C. A.

Order of Business.—1, Roll call; 2, reading of minutes of last meeting; 3, reading of notes from absentees; 4, proposals for membership; 5, report of committee on credentials; 6, resolutions introducing new business; 7, selection of next place of meeting; 8, report of special committees; 9, report of treasurer; 10, election of delegates to State societies; 11, miscellaneous business; 13, address of the retiring president; 14, reading of essays; 15. election of officers; 16, adjournment.

In Memoriam.—Wesley V. English, M.D. J. A. Scroggs, M.D., Keokuk, Iowa.

List of Papers.

1. Charles W. Hall, Kewanee, Ill., "Epilepsy."
2. J. B. Murphy, Chicago, Ill., "Perforative appendicitis."
3. Wm. Jepson, Sioux City, Iowa, "Intestinal obstruction from a gallstone."
4. John Punton, Kansas City, Mo. "Treatment and prophylaxis of insanity."
5. E. Wyllys Andrews, Chicago, Ill. "Recent improvements in the surgery of hernia."
6. H. H. Mudd, St. Louis, Mo. "Cancer of the tongue."
7. J. S. Pyle, Canton, Ohio. "A plea for the appropriation of criminals condemned to capital punishment to the experimental physiologist."
8. M. S. Marcy, Peoria, Ill. "Abortion."
9. George Minges, Dubuque, Iowa. "Further Experience with Koch's tuberculin."
10. Boerne Bettman, Chicago, Ill. "Extraction of a piece of steel from the vitreous with a magnet."
11. John I. Skelly, Pekin, Ill. "Symphyseotomy."
12. C. E. Ruth, Keokuk, Iowa. "Surgical treatment of meningitis."
13. E J. Blair, Monmouth, Ill. "Amputation above the hip joint."
14. A. V. L. Brokaw, St. Louis, Mo. "The conservative treatment of uterine myomas by operation."
15. Martin M. Ritter, Chicago, Ill. "Intubation vs. tracheotomy."
16. J. F. Percy, Galesburg, Ill. "Vivisection."
17. John B Bacon, Chicago, Ill. "A new operation for the cure of stricture of the rectum—with demonstration."
18. O. B. Will, Peoria, Ill. "Bacteriology of the female genital tract."
19. Henry T. Byford, Chicago, Ill. Subject not announced.
20. T. J. Beattie, Kansas City, Mo. "The management of uterine fibroids."
21. Ludwig Hektoen, Chicago, Ill. "Fibroid induration following lobar pneumonia."
22. Geo. N. Kreider, Springfield, Ill. Subject not announced.
23. Bayard Holmes, Chicago, Ill. "Can an adequate system of medical education reduce the annual public expenditures for the education and support of the defective and dependent classes? What would such an education cost, what would it save, and how can it be instituted?"
24. Frank Parsons Norbury, Jacksonville, Ill. "Nervous and mental disorders in women incidental to childbirth."
25. Nicholas Senn, Chicago, Ill. Subject not announced.
26. J. H. Duncan, St. Louis, Mo. "Lupus."
27. Ellen H. Heise, Canton, Ill. Subject not announced.

How to become a Member.—Extract from the Constitution: "Membership in this Society shall be limited to those members of the medical profession who are regular graduates in medicine, and who acknowledge allegiance to the American Medical Association. * * * All applications for membership shall be referred to the Committee on Credentials, and shall be accompanied by a fee of two dollars." Extract from the By-Laws: "Every member of this Society shall pay to the Treasurer the sum of one dollar annually before participating in the business of the meeting."

Special Notice.—The medical men of Peoria take this opportunity of cordially inviting you to this meeting.

Officers.—President, Dr. W. H. Martin, Kahoka, Mo.; Senior V. P., Dr. Calvin Snook, Fairfield Iowa; Junior V. P., Dr. O. F. Pyle, Memphis, Mo.; Treasurer, Dr. H. S. Reese, Wayland, Mo.; Secretary, Dr. J. M. Ball, Keokuk Iowa.

Committee on Arrangements.—Dr. W. R. Allison, Peoria; Dr. J. F. Percy, Galesburg; Dr. Frank Parsons Norbury, Jacksonville.

The Medical Society of the Missouri Valley met at Council Bluffs, Iowa, on Thursday, Sept. 21, 1893, under the presidency of Dr. J. M. Knott of Sioux City. The total membership of this Society has reached 365, and it is in a flourishing condition. Dr. F. S. Thomas of Council Bluffs, is the secretary.

DOMESTIC CORRESPONDENCE.

Mr. Ernest Hart Replies to Dr. Hammond.

To the Editor:—My respect for and my sympathy with the medical profession in America, and my knowledge of their sentiments, forbid me to regard Dr. William A. Hammond as their representative in the defense which he puts forward in the columns of the *New York Medical Journal*, Sept. 16, of the practices of publicity hunting, by newspaper interviews, newspaper portraits and of the use of and traffic in secret preparations, etc. I have in the course of recent travel received personally from many hundreds of prominent and representative physicians in Milwaukee, Washington, Boston, Philadelphia, Chicago, Cincinnati, Detroit, and from all parts of the United States, their cordial congratulations on the tone and substance of the addresses which I had the honor to deliver at Milwaukee and Washington. I have been assured on all hands of the entire sympathy of the great body of the profession in the views therein laid down and discussed. I should have been surprised, however, and perhaps disappointed if they had not elicited some expression of pain and anger from certain quarters. "Let the galled jade wince; the withers" of the great American medical profession are, I am assured, "unwrung." Your correspondent, in an access of ethical agnosticism, assumes that the enumeration of ethical data as to medical conduct was, or could be, a reproval direct or implied to the medical profession of America. That is an unmerited insult which he addresses to his profession, and indicates a view which I apprehend to be special to himself. Let him enjoy the practices which he defends; I do not think he is likely to find much support or sympathy in them from medical men in good standing. His account of the position of the medical men in Great Britain is a parody undeserving of serious notice. So, as to myself, whom he favors with some personal abuse, I have been avowedly the scientific adviser to, but it is untrue that I have ever held any of the stock of, the Apollinaris Water Company. As to his other trivialities, I was the guest of the Pan-American Medical Congress, and on entering its headquarters I registered in ceremonious form.

I have no desire to be honored amongst "the Pan-Anglicans," the "Fat Men of America," and the other objects of lay interest, with whom Dr. Hammond puts medical men on a par, and I do not agree with him that medical men should desire to share with them the honor of newspaper notoriety. I do not believe any details of my medical career have ever appeared in any lay paper.

I suggest that it might be desirable for Dr. Hammond to rely less upon his imagination for his facts, and not to assume to speak for a profession from which he has no sort of mandate, and which would, I am well assured, repudiate, if consulted, both his advocacy and his methods of action and of expression.

I am assured that he utterly misrepresents that profession, both in his statement of principles which he ascribes to it, and in his abuse of myself. I am, sir,

Yours faithfully, ERNEST HART.

MISCELLANY.

The Chemical Laboratory of the U. S. Department of Agriculture of the World's Columbian Exposition.—Of interest to medical science is the work and exhibit of the chemical division of the National Department of Agriculture in the Government Building at Jackson Park.

This exhibit occupies a liberal floor space in the northeast corner of the Government Building, and is designed to illustrate the chemical work of the department in its various aspects. The appliances for investigating sugar producing plants are perhaps the most complete of any in the world. Full illustrations are given of the analyses of sugar cane sorghum and sugar beets. Large numbers of beets are daily reaching the laboratory from different parts of the country and are at once analyzed. This part of the exhibit has also been put to good use by the board of awards, several hundred samples of sugars and syrups having been examined for the agricultural jury.

A most interesting exhibit shows how the Darwinian law of natural variation has been utilized in the improvement of a sugar producing plant. In 1888 experiments were commenced by the department on this line. In that year in a plot of sorghum growing in Kansas and submitted to systematic examination, there was found one plant with a phenomenal content of sugar. The seeds of this plant were propagated carefully and the progeny again examined. None of the progeny reached the degree of perfection of the parent, but many plants were produced showing a content of sugar above the average. The best of these was selected for further planting, and this process has been continued up to the present time. From this one parenthead, as a result of these continued selections, a variety of sorghum cane has now been fully established having a sugar making value equal to the best sugar cane of Louisiana. Last year nearly five hundred selections were made from canes which had an average content of nearly 20 per cent. sugar. Illustrations are also given of the same line of work with sugar beets.

Of most interest to the medical profession, however, are the exhibit and work relating to the adulteration of foods. Pure food is an essential to health and every physician is deeply interested in securing to the public, immunity from fraud in this direction, of both a financial and hygienic nature. The thesis which is proposed by the exhibit is that all foods exposed for sale should be what their names imply. The exhibit shows how far our American food products fail to meet the fundamental conditions of this proposition. Honey purchased in the open market is shown to have been made quite independent of the mediation of bees, or at most having only enough pure honey to give the required flavor. Coffee beans are exhibited which have been molded from a mixture of meal and molasses. Canned goods kept beautifully green by copper make an important addition to this display of the ingenuity of man, unrestricted by any regard for health.

The results of the work in this line of investigation do not condemn the use of copper in greening peas, but emphasize the justice of the demand that artificially greened goods should carry a label announcing that fact, and stating the character and amount of the added greening material. The same remark may be applied to the data obtained by the work of the chemical division in regard to the use of antiseptics in the preservation of food. The occurrence of salicylic, sulphurous, benzoic and boric acids is shown to be of wide extent, and attention is called to the fact that the medical fraternity and the people should be informed regarding the use of these preservatives. If, then, the patient and his doctor prefer to use such foods, it is a question for them alone; the public has at least done its duty in relation to the matter.

There is by no means unanimity of opinion among hygienists in regard to the effect on the human system of continued small portions of salicylic acid, copper, etc., as they occur in the food. In fact, opinions on such subjects are of little value unless based on actual experiment. At least one thing, however, is certain, viz., that no harm is done in letting the consumer know what he is eating.

Every day a large number of chemists may be found busily studying some of these problems relating to foods, and physicians might spend a profitable hour in examining the character of the work.

Distilled liquors, wines and beers are also analyzed for the jury of awards, and the final distribution of medals will rest largely on the results of these investigations.

One of the very interesting facts of the work is found in the study of the olive oils which are on exhibition. It is claimed by the producers of olive oil in California, that they have a powerful competitor in the cotton oil of our Southern States. Much of this oil, it is asserted, finds its way to France, Italy and Spain and returns to this country under the guise of pure olive oil. The examinations which have been made so far do not afford much comfort to the promoters of that rumor. Even were it true, it is not at all likely that foreign exhibitors would place any such adulterated oil in competition. There is no manner of doubt of the fact that a large proportion of the salad oil purchased in this country has had its origin in Mississippi and Texas, but such oils are not found to any great extent in Jackson Park masquerading as products of the olive.

An important part of the work now in progress in the chemical laboratory consists in the analysis of cereals for the agricultural jury. All those cereals—nearly 1,000 in number which have been adjudged worthy of competition by the jury have been sent to the laboratory for examination. The weight per unit volume is first determined, whence the weight per bushel is calculated. Next, the sample is ground until it all passes a very fine sieve. After the removal by means of a magnet, of any iron dust which may have been mixed with the flour through abrasion of the steel mill, the nutrient value of the sample is determined by analysis. The moisture, ash, oil, fiber, and albuminoids are determined by direct analysis and the starch by difference. On the data thus obtained the food value is calculated. For this purpose the percentage of moisture, ash, and fiber is deducted and the nutrient value calculated on the residue, the relative values of the starch, oil and albuminoids being as 1:2,5:2.5 respectively. On these data and the report of the experts on the commercial value of the samples the awards are made. Space does not permit of a more extended notice of the work of this laboratory in food products. Above have been mentioned only some of the more important of the investigations. But in addition to these, nearly all the food products on exhibition in the Agricultural Building have been subjected to some kind of a chemic examination. It is doubtful whether any other work, not strictly of a medical nature, which is carried on at Jackson Park has a more intimate connection with public health and State hygiene than that of the chemic laboratory.

The work is under the direction of Dr. H. W. Wiley, chief chemist of the Department of Agriculture of Washington. Dr. Wiley is himself a graduate of medicine, and while not

sacrificing the promotion of agriculture in any way his medical training may be allowed some credit for the direction which the investigation in food products has taken.

Fair Emergency Hospital Work.—Cases Cared for by Exposition Doctors and Nurses Since May 1.—While it is one of the most important institutions connected with the Fair little has ever been said about the work of the Emergency Hospital. Under direction of Dr. John E. Owens the department devoted to caring for sick and injured people from the start has performed its duties most admirably. The staff of assistant surgeons is composed of Drs. W. H. Allport, N. R. Zeager, S. C. Plummer, and E. J. Edgerly, with J. L. Hillsmantel and W. C. Roughly as resident physicians, W. H. Gentles, Superintendent of Ambulances, and Miss M. R. Brown of St. Luke's Hospital, head nurse. She has at all times a corps of ten trained nurses under her command. They are changed every month so as to give others an opportunity to see the Fair. These nurses are selected from the best hospitals of New York, Pennsylvania, Massachusetts, Baltimore, Boston, Washington, Chicago, Philadelphia, Toronto, and other large cities. Up to Sept. 16th 13,765 patients had been treated. Out of this number there were twenty deaths, three of them victims of the Cold-Storage fire. The record of cases by months is as follows:

May	2,621
June	2,966
July	3,292
August	3,169
September (16 days)	1,717
Total	13,765

The great number of cases in May is due to the fact that a great many workmen were injured in various ways. The great majority of patients have, so the physicians say, been victims of indigestion, superinduced by irregular eating and change of diet. On hot days prostrations were quite numerous. July 4, with 170 cases, was the biggest day, and Sept. 14, last Thursday, Ohio day, furnished 151 ambulance calls. In May were 315, in June 406, in July 581, and in August 564.

Increase of Alcoholism in Europe.—According to the *Lancet*, June 24, the multiplication of deeds of violence among the Latin peoples of Europe, can be distinctly traced to use of stronger drinks. In Southern and Central Europe the human subject is even more susceptible than the dwellers to the north, to the evil influences of alcoholic intoxicants. Even the nationalities dwelling along the Mediterranean have, from this cause, during the last decade, raised the crimes of bloodshed to a figure quite appalling.

Opening of the Chicago Medical Colleges.—The Rush Medical College and the Chicago Medical College respectively held their opening exercises on Tuesday, Sept. 26. The introductory lecture was given by Dr. Norman Bridge at Rush Medical College, and at the Chicago Medical College by Prof. N. S. Davis.

Editorial Change.—Dr. F. S. Parsons has been appointed editor of the Philadelphia *Times and Register*, to succeed Dr. A. F. Waugh. Dr. Parsons has been for many years a member of the American Medical Association and at the last meeting was secretary of the Section on Diseases of Children.

Coroner of New Orleans.—Dr. G. B. Lawrason has been appointed coroner of New Orleans Parish by Governor Foster, to fill the vacancy caused by the death of Dr. Seeman.

There has been too much microbe hunting in Hamburg and too little attention paid to general sanitation.

THE PUBLIC SERVICES.

Army Changes. Official list of changes in the stations and duties of officers serving in the Medical Department, U. S. Army, from September 16, 1893, to September 22, 1893.

Capt. LOUIS BRECHEMIN, Asst. Surgeon, is granted twenty-three days' leave, to take effect about September 17, 1893.

Major HENRY MCELDERRY, Surgeon U. S. A., is granted leave of absence for one month, to take effect about October 1, 1893.

Capt. CURTIS E. PRICE, Asst. Surgeon, relieved from duty at Ft. Wadsworth, N. Y., and ordered to report to the commanding officer, Ft. Porter, N. Y., for temporary duty at that post.

Capt. WM. C. SHANNON, Asst. Surgeon, is relieved from duty in the office of the Surgeon General of the Army, and as assistant to the attending surgeon, Washington, and will proceed to New York City, and report in person to the commanding general, Dept. of the East, for duty as attending surgeon and examiner of recruits in that city, relieving Capt. GUY L. EDIE, Asst. Surgeon.

Capt. H. S. T. HARRIS, Asst. Surgeon U. S. A., is relieved from duty at Ft. Keogh, Mont., and assigned to duty at Ft. Preble, Me.

Capt. M. W. WOOD, Asst. Surgeon U. S. A., is relieved from duty at Ft. Preble, Me., and assigned to duty in Boston, Mass., as attending surgeon and examiner of recruits.

Capt. FRANCIS J. IVES, Asst. Surgeon, ordered to proceed from Ft. Sheridan, Ill., to Chicago, Ill., and report in person to Capt. LOUIS A. LA GARDE, Asst. Surgeon, in charge of the medical section of the War Department exhibit, World's Columbian Exposition, for temporary duty.

Capt. GUY L. EDIE, Asst. Surgeon, upon being relieved from duty in New York City by Capt. WILLIAM C. SHANNON, Asst. Surgeon, will proceed to Washington, D. C., and report in person to the attending surgeon for duty in his office.

Capt. WM. G. SPENCER, Asst. Surgeon, is granted six months' extension to sick leave of absence granted in S. O. 108, A. G. O., May 13, 1893.

The Commission of the Surgeon General of the Navy.—From one of the military service papers we learn that a fine specimen of the printer's art has just been turned out by the Government Printing Office, being the commission of Surgeon General J. R. Tryon, U. S. N. The commission is printed on vellum and is a beautiful piece of work. In forwarding commissions to bureau officers care is generally taken that the document is neither folded or rolled, so that the "sheepskin" can be framed without showing wrinkles or deformations. The commission of the Surgeon General will be signed by the President in a few days.

Circular.

The Treasury Department has issued the following:

Unlabeled baggage of steerage passengers, and unlabeled baggage of second cabin passengers from cholera infected ports or places, to be disinfected at the quarantine station for the port of arrival.

TREASURY DEPARTMENT, WASHINGTON, D. C., Sept. 19, 1893.

To quarantine officers of the United States, commissioners of immigration collectors of customs, steamship agents and others:—Department circular No. 65, May 4, 1893, relating to the labeling of baggage and the issue of inspection cards to steerage and cabin passengers, provides that all baggage of steerage passengers destined for the United States shall be labeled at the port of departure, said label to bear the seal or stamp of the consulate or of the medical officer of the United States serving at the foreign port; also, that the baggage of cabin passengers from cholera infected ports or places shall be likewise labeled. Information has been received that occasionally pieces of baggage arrive without being labeled as above required.

It is hereby directed that any piece of baggage, including hand baggage, belonging to a steerage passenger, not bearing a label as provided for in said circular, shall be disinfected by steam at the quarantine station for the port of arrival; also, that the baggage of second cabin passengers coming from cholera infected ports or places, not bearing the label as provided for in said circular, shall be likewise disinfected by steam at the quarantine station for the port of arrival.

In view of the difficulty of accurately inspecting each piece of baggage while on board ship at the quarantine, commissioners of immigration and custom officers are hereby directed to scrutinize the baggage of immigrants when landed at the immigrant station, and should any piece of baggage, including hand baggage, be discovered to be without a label as above required, they are directed to return the same to the quarantine of the port, where said baggage shall be disinfected by steam, and properly labeled with a certificate to that effect, before said baggage shall be allowed to pass into the United States.

CHARLES S. HAMLIN, *Acting Secretary.*

1893. Department No. 141, Marine Hospital Service.

LETTERS RECEIVED.

(A) Atkinson, W. B., Philadelphia; Alma Sanitarium Co., Alma, Mich.; Arend, A., Chicago; Atkinson, E. C., Colorado Springs, Colo.; (B) Bane, W. C., Denver, Col.; Barker, A. R., Cleveland, O.; Booth, C. E., Low Moor, Va.; Brucker, C. M., Tell City, Ind.; Bloodgood, D., Brooklyn, N. Y.; Berger, L. C., Philadelphia, Pa.; (C) Castle, Wilmot & Co., Rochester, N. Y.; Cordier, A. H., Kansas City, Mo.; (D) Dios Chemical Co., St. Louis, Mo.; Durgin, S. H., Boston, Mass.; Dolliber, Goodale & Co., Boston, Mass.; Dixon, W. A., Ripley, O.; Daeuble, Louis, Allegheny, Pa.; (F) Flandrau, T. M., Rome, N. Y.; Flint, Austin, New York, N. Y.; (H) Hare, H. A., Philadelphia, Pa.; Hummel & Parmele, Philadelphia, Pa.; Hahn, H. H., Youngstown, O.; Hoff, J. W., Pomerine, O.; (L) Lippincott, J. B. Co., Philadelphia, Pa.; (P) Peck, G. S., Youngstown, O.; (R) Roberts, J. B., Philadelphia, Pa.; Rogers, F. C., Milwaukee, Wis.; (S) Sprague, G. P., Boston, Mass.; (T) The Tilden Company, New Lebanon, N. Y.; The New York Policlinic, New York, N. Y.; The J. H. Bates Advertising Agency, New York, N. Y.; (V) Voldeng, M. N., Independence, Iowa; (W) West, H. A., Galveston, Texas; Walker, J. E., Brooklyn, N. Y.; Wesener, John A. Chicago.